HYGEIA

The HEALTH MAGAZINE

PUBLISHED BY THE AMERICAN MEDICAL ASSOCIATION

SEPTEMBER, 1933

25 CENTS

BEGINNING:

I WANT TO KNOW - A FIRST PHYSIOLOGY

BY OSCAR REISS AND DOROTHY M. BARUCH

Be Sure It's **Welch's** Certified Pure—Pasteurized **GRAPE JUICE**

It Supplies Many Dietetic Values

Just picture your child back of this glass of Welch's Grape Juice. Bright eyes, rosy cheeks, radiant smile . . . symbols of health . . . the result of protecting care.

You may think of Welch's only as a beverage, as a delightful and pleasing fruit drink. It is more than that. Recent tests in an Eastern University Laboratory reveal that Welch's possesses many valuable nutritional elements.

FOR QUICK ENERGY

Welch's Grape Juice contains simple grape sugars which are speedily absorbed and require no digestion.

Welch's Grape Juice is nature's own energy builder. A glowing purple liquid food, containing essentially the same nutritional value as ripe Concord grapes fresh from the vine . . . sugars, vitamin B content, iron, potassium, and energy elements (286 calories to the pint). For children and adults, Welch's offers an abundance of body-energizing properties combined with a delicious taste. It contains Vitamin B (B_1). Its minerals have, as an end effect, an alkaline reaction on the body. It provides good quantities of iron. Thus, Welch's is valuable as a hemoglobin or blood restorative.

Why Welch's
AND NOT CHEAPER JUICES?

It is the Welch process that retains in the bottled juice the valuable nutritional properties of ripe Concord grapes so essential to the system. Welch's is the Certified Pure, Pasteurized Grape Juice. It's aged three months to permit the natural but crude tartaric acid crystals to settle out of the juice. It contains no adulterants, no synthetic flavors, no artificial coloring, no preservatives, no added water. And it's inexpensive . . . the cheapest in 35 years. Welch's is undiluted grape juice, so many prefer to add one-third water to the pint. Mixed this way, Welch's costs less than 3½c a glass.

CERTIFIED PURE

By noted scientist through Tests made in Eastern University Laboratory

THE WELCH GRAPE JUICE CO., Westfield, N. Y.

HYGEIA, the Health Magazine, is published monthly by the American Medical Association, 535 North Dearborn Street, Chicago, Ill. Yearly subscription price, $2.50; for foreign postage add 75 cents. Volume 11, Number 9. Entered as second-class matter March 21, 1923, at the postoffice at Chicago, Ill., under the Acts of March 3, 1879. Acceptance for mailing at special rate of postage provided for in Section 1,103 Act of October 3, 1917, authorized March 21, 1923.

HYGEIA

THE HEALTH MAGAZINE

Published by the American Medical Association • • • Edited by Morris Fishbein, M.D.

Volume 11 SEPTEMBER, 1933 Number 9

TABLE OF CONTENTS

	Page
Cover Design *Andrew Benson*	
Football Injuries	776
Colleges and Health *Rose Henderson*	777
Education—Yesterday, Today and Tomorrow	780
"Now When I Went to School" *William Arlis Richards*	781
Are They Ready for School? *Beulah France*	784
Removing Rural School Handicaps to Mental Accomplishment *Carlton Palmer*	788
The Mother and the School *Regina J. Woody*	791
Forecast for October	794
Song for Any Day *Lenore Riggs*	795
Denny, the Elusive *Josephine Boring*	796
Pals *Ann Marie Fox*	800
Sex Education. III. The Anatomy and Physiology of the Reproductive System *Thurman B. Rice*	801
Why a Nursery School? *Elizabeth Gray Miller*	805
What Your Child Eats at Noon *Mary C. Brown*	806
Following Education Around the Globe	810
Individual Differences in a Sight-Saving Class. *Marguerite Kastrup*	812
Can School Days Be Safe Days? *Curtis Billings*	815
Camp Days	819
Janeil Shop *R. T. Thompson*	820
Brief Healthgrams	822
Training for Athletics and Health. Chapter IX. *Alfred E. Parker*	823
Progress in Preventive Medicine. Part VII. *P. M. Ashburn*	828
Health Pursuits in Pictures	832
The Freezer Twins *Ivah Simpson*	833
I Want to Know: A First Physiology *Oscar Reiss and Dorothy Walter Baruch*	836
School and Health	840
New Books on Health	845
Questions and Answers	846

CONTRIBUTORS TO THIS ISSUE

● In his article, "Now When I went to School," William Arlis Richards, a school principal of Connersville, Ind., shows the contrast between the schools of yesterday and the schools of today. . . . Nutrition in college dormitories is the important subject discussed by Rose Henderson, New York City. . . . Beulah France, R.N., New York City, puts the need of the child's thorough mental and physical preparation squarely before the parents when she asks, "Are They Ready for School?"

● Carlton Palmer, who discusses the problems involved in "Removing Rural School Handicaps to Mental Accomplishment," is professor of physical education, University of Alabama. . . . Regina Woody, Elizabeth, N. J., the wife of a physician, encourages a cooperative and understanding attitude between the mother and the school. . . . "Denny, the Elusive," is the incorrigible and somewhat dubious hero of the story by Josephine Boring, Kansas City, Kan.

● Dr. Thurman B. Rice, associate professor of bacteriology and public health, Indiana University School of Medicine, continues his series on "Sex Education." . . . Elizabeth Gray Miller is director of the Nursery School, Plainfield, N. J. . . . Hints for preparing attractive, nutritional school lunches, both at home and in the school cafeteria, are given by Mary C. Brown in her article, "What Your Child Eats at Noon."

● Curtis Billings, Chicago, who tells how school days may be made safe days, is affiliated with the National Safety Council. . . . Marguerite Kastrup, Cleveland, tells how the child's mental, emotional and social as well as physical vision may become adjusted in the sight-saving class. . . . Janeil Shop, a project conducted in a public school for crippled children, is described by R. T. Thompson.

● Alfred E. Parker, director of physical education, Berkeley (Calif.) High School, discusses accidents and first aid. . . . Dr. P. M. Ashburn, Washington, D. C., Colonel, U. S. Army, retired, describes the progress made in the prevention of diseases of the respiratory tract.

● Ivah Simpson presents patterns and a story about Ora and Oran Orange Ice, the Freezer Twins.

● "I Want to Know: A First Physiology," which begins in this issue of Hygeia, is the work of Dr. Oscar Reiss and Dorothy Walter Baruch. Dr. Reiss is associate professor of pediatrics, University of Southern California School of Medicine. Mrs. Baruch, who is assistant professor of education, Whittier College, is the author of much material for and about children.

Published monthly by the American Medical Association, 535 North Dearborn Street, Chicago. Subscription price $2.50 a year. Single copies 25 cents. Foreign subscriptions $3.25 a year.

Copyright, 1933, by the American Medical Association. All rights reserved.

September, 1933

EDITORIAL

FOOTBALL INJURIES

THE opening of the football season focuses attention anew on the numerous injuries associated with this sport. During the season of 1931 at least fifty players were killed in this game. The nature of the sport is such as to make certain types of injuries much more likely than others. The rules are being changed constantly with a view to eliminating these hazards, but there seems to be no certainty that the season of 1933 will be much less hazardous than was that of 1931. The number of serious and fatal injuries reported during last season was disconcerting. Approximately 750,000 boys and young men play football each year. The coaches themselves have made an extended study of fatalities and injuries. The investigations made in 1932 indicate that the fatalities occurred most frequently between the ages of 16 and 19 years. It is concluded by Mr. Fielding Yost that defense is more dangerous than offense, and that the position of tackle is the most dangerous position in the game. No one knows exactly how many injuries occur with effects later in life. Obviously, the number of deaths and injuries immediately harmful is sufficient to demand special consideration.

AS evidence of the extent of the problem two physicians, associated with football, recently published a book on the control of football injuries. Dr. Marvin A. Stevens was head football coach of Yale University from 1928 through 1932, and president of the American Football Coaches Association. He is at the same time a surgeon of competence. Dr. Winthrop M. Phelps, who cooperated with him in the development of the book, is an orthopedic surgeon associated with Yale University.

In their consideration of football injuries they point out that every boy who plays football ought to have a thorough physical examination first and a similar examination at the end of the season. They believe that such an examination should cover not only the routine medical examination of various parts of the body but, if possible, also an x-ray examination of the heart and of the lungs. They have outlined a complete system of hygiene for the football player, including not only the sanitation of the dressing rooms and the care of the football field but also the type of clothing to be worn by players and many similar practical questions.

In a brief paragraph they indicate some of the limitations which must be placed on football if the number of injuries and fatalities is to be minimized. Thus they say:

> There can be no question but that infection of any nature is conducive to fatigue and exhaustion. A player who has a common cold or any other upper respiratory infection certainly has decreased efficiency. Any player with an elevated temperature or having acute abdominal pain should not be allowed to play football, although many books and moving pictures laud a boy who is unwise enough to conceal such a fact from the trainer or coach. He not only does harm to himself, but handicaps his team. The same thing is true of any football injury which interferes with the perfect functioning of the athlete's body. A player owes it to himself, his parents, his team and his coach to keep the trainer or physician in charge of the team correctly informed concerning his injuries, infections and physical condition. . . .
>
> Players who have injuries should not be allowed to participate in either scrimmage or a game. Even minor injuries need rest and treatment. Usually the player who enters a game with a minor injury is not able to function properly and turns out to be only 60 to 70 per cent efficient. There is undoubtedly some player on the bench who will be much more valuable to the team and whose substitution will prevent the injured player from becoming more seriously injured. An injured player usually unconsciously, but at times consciously, protects his injury during scrimmage or a game. In doing so he throws a great burden on the rest of his body and consequently becomes more easily fatigued. Such a protective mechanism often means lack of balance and exposes him to added injury in the same or other regions.

THE authors point out, moreover, that it has been considered smart in the past for the quarterback to send his plays at the groggy or weakened opponents and thus force their removal from the game, whereas ideal sportsmanship would demand either that the quarterback notify the referee of the weakened player's condition or send the plays elsewhere temporarily.

Probably all of this is too much to hope for in the conduct of a highly competitive sport, the appeal of which is largely to gate receipts. Nevertheless, it is only by such considerations and by having leadership which realizes that nothing less than competent control will save the game for its devotees that eventual minimization of accidents and injuries will occur. More than anything else this study indicates the importance of competent medical attention at the earliest possible moment when a player is injured.

COLLEGES and HEALTH

By

Rose Henderson

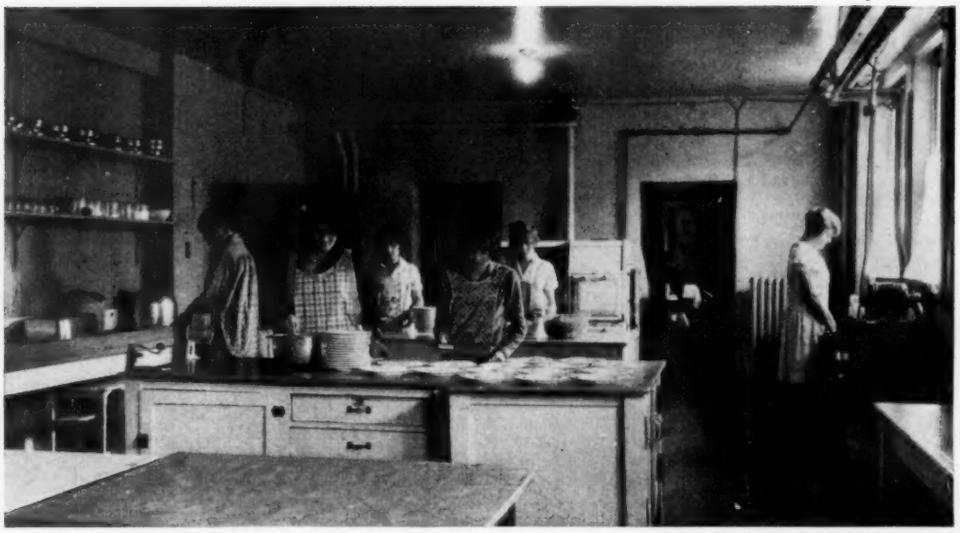
A student's room at Munger Hall, the new cooperative house at Wellesley College.

CONSIDERABLE criticism has been directed at colleges and universities to the effect that they fail to emphasize physical care and development and to provide conditions for the growth of the body as favorable as those provided for the growth of the mind. As a former student and instructor in several universities in this country, I believe that such criticism has frequently been justified but that often it has been exaggerated and superficial. In my opinion whole attitudes and habits of living have needed attention and correction rather than some one item, such as dormitory food, which in the opinion of some critics should be changed radically in order to effect a great improvement in student health.

Well balanced and adequate meals are a basic and possibly the transcending factor in physical well being. But even good eating habits require more fundamental attention than the mere consumption of enough, or perhaps too much, daily food. This attention and regulation should come, in part at least, from the student's own intelligent acquiescence and choice. It is possible to eat badly at a well provided table.

Now that more health teaching is being done in the elementary schools, there should be less need for it in colleges. However, we are never too old to learn about physical and mental health. In the recent development of cooperative dormitories all over the country an opportunity for practical health teaching and development is being provided in a natural and fundamental way. At these college homes at which the students do much or all of the work, wholesome and sensible habits of living may be learned by actual laboratory methods, and the student's contentment and morale may be improved by making him an agent in his own social and material environment. If he helps to create his home background in a practical, tangible way, he will be forming habits and gaining knowledge which should aid him all his life. It is an educational experience of the most vital sort if he finds himself a happy contributor to the whole living régime of his group and if he learns to live simply and graciously with others. Incidentally, food schedules may be controlled here as nowhere else, and economic meals which provide proper nourishment are a chief aim and necessity of the scheme. The student learns here just what his money will buy, and he has no ground for complaint against the school such as he often thinks he has at a regular dormitory where he pays a stated sum for meals and room provided for him without his effort.

The main consideration in the establishment of cooperative college dormitories has been the economic one, and the depression has occasioned special efforts to reduce living costs.



Cheerful, sanitary, conveniently arranged and well equipped is the cooperative kitchen in Clara Barton Hall, Iowa State College.

Many students or would-be students are unable to pay the regular rate for rooms and board. In many cases, young men and women who are out of employment have concluded that now is the time to make preparation for the future by going to college if it can possibly be managed. This has intensified the usual situation, already intensified by the hard times. In the past, poor students have often struggled through school on a minimum allowance, to the great detriment of their health. They have won coveted mental training at the cost of physical starvation and neglect. Often they have been among the most brilliant and promising and have handicapped themselves for life by the physical strain attending their scholarly development.

The tendency of modern college managements to make some adequate provision for such students is indeed commendable. At the same time the cooperative dormitory plan provides an opening for demonstration and experience in actual home making and for general emphasis on the really important and dignified matters related to simple, healthful living. Doing one's own housework on a cooperative plan calls for a sharing of responsibility; it is a good preparation for married life, a kind of preparation that colleges have been accused quite generally of neglecting.

Cooperative halls for both men and women are operated successfully with the cost of living reduced about $300 a year at various institutions, and college authorities state that the educational advantages outweigh the financial. Academic standing as well as economic need is made a basis for selection in most of the colleges where long waiting lists of students making application for admission to cooperative halls attest the popularity of the plan. A large percentage of the cooperative students win honors in both athletics and class work. It is intended that their work in the dormitories shall in no way conflict with their carrying full academic programs. In many of the girls' halls the students do all the cooking as well as other household tasks, and the experience of meal planning, preparation and serving, combined with the general training in home management, is regarded as equivalent to a course in home economics.

In some colleges, hospital reports have shown that the health of the cooperative students is superior to that of other students, supposedly because of the regular and systematic hours. The great health gains, however, lie in providing a good living for the poor student who would otherwise stint himself and in stressing for all the importance of a wholesome diet and general living habits through these examples of cooperative housekeeping.

While a few cooperative dormitories date back several decades, the plan was not widely popular until about five years ago. Now more students than can be accommodated are seeking to live in this way, and many institutions have increased their facilities for this plan of student help during the last year. Often the cooperative homes seem more congenial to the students, who enjoy doing the work and take pride in doing it well. The activities of home making help to overcome the sense of loneliness and desolation which young people often experience, especially in their first years away from home. "We have much closer contact with our neighbors and get to know one another better than when we are not working together," one girl explains. Parties and other social affairs are enjoyed by the cooperative halls. In some halls meals are served and parties are managed for outside groups in order to add to the home treasury.

For six years the cooperative dormitory has been popular at the Iowa State College of Agriculture and Mechanic Arts, at Ames, Iowa; it is typical of the general plan of work, the country over. In Clara Barton Hall, appropriately named for the Red Cross leader, 102 girls are now accommodated, and this year a new hall for 63 men was opened. This is the second year for another large cooperative girls' house. There is a social director in charge of all three halls, and a dietitian supervises the meal planning, food buying and paying of bills. The men do all the work necessary in the dormitory, with the exception of the cooking.

"The depression has greatly affected all our students," says the director of housing at Ames. "We have changed the cost of food throughout our halls. We have aimed to keep the cooperative costs just about half those of the regular dormitories. Just now, the cooperative men are paying $3 a week for food. Of course, they eat much more than the girls. In the cooperative halls for girls, the cost of food a week is $2.15. Can you imagine a group living well on that small amount? They carry off scholarship honors practically all the time. I think our cooperative girls are very happy."

By buying supplies in large quantities the managers of these halls are able to get the best qualities at the lowest prices; and by careful and intelligent planning and preparation, adequate meals are provided at the least possible expenditure. The importance of rest and sleep, of cleanliness and other hygienic considerations comes in naturally, and students learn individual health habits as well as general home management, decoration and other similar matters. Kitchens are cheerful, sanitary and conveniently arranged and equipped. Provisions are made for the girls to sew and for both the girls and the boys to do their own laundry work if they wish. Dining rooms and tables are made attractive, and an atmosphere of efficiency, of mutual helpfulness and good companionship adds to the student's enjoyment of the place.

The work is usually divided according to schedules which rotate automatically from group to group. At the Clara Barton Hall at Ames, for example, four committees have charge of the cleaning and dusting of the halls, stairways, living rooms and bath rooms; two groups prepare the breakfast and the luncheon, and two have charge of the dinner. Each group is responsible for one duty for a period of a week. The weeks of cleaning and the weeks of cooking are alternated between the groups. The time spent on household duties averages about one and one-half hours a day.

Since the college specializes in dairy and agricultural products, the best milk, eggs, meats, fruits and vegetables are directly available. Quantity buying helps here, as elsewhere, but the college does not reduce prices for the dormitories.

At Wellesley College, Wellesley, Mass., a new cooperative house was completed last December which provides for 110 students, more than had formerly lived in two smaller houses set aside for the purpose. This new hall is a good example of home-like conditions, with plenty of fresh air and sunlight and the opportunity to relieve brain work with physical exercise in congenial surroundings. The up-to-date kitchen is equipped with electrical appliances such as dishwashers, mixers and refrigerators which would make any housewife envious. Here the students save $300 a year by the cooperative plan. The house is organized with one head of the house, a cook and three other servants; the rest of the work is done by the students.

Among the institutions that have complete cooperative schedules are Mount Holyoke, Smith, Boston, Northwestern, Illinois, Minnesota and Wisconsin. The Massachusetts Institute of Technology opened its first cooperative house two years ago, thus marking a trend toward more housekeeping among men students. An hour's work a day is a quite general requirement for the cooperative privileges.

At various institutions, efforts to aid the student who is living on his own and "batching it" are tending to improve home conditions and especially to teach food values and the ability to live cheaply without risking physical deterioration. Thousands of college boys as well as girls are doing their own cooking these days in order to make ends meet, and while it is not possible to supervise their work as closely as if they were in a campus hall, instruction and advice help them to make the most of their food funds.

Practical instructions in regard to food values and inexpensive meals as well as cooperative housekeeping are helping college students to live better poised and more wholesome lives, physically and mentally. Such training will be of permanent benefit to the great mass of students.

Attractive, efficiently managed dining rooms, such as this one at Munger Hall, add to the student's enjoyment of the college home.

EDUCATION

YESTERDAY TODAY and TOMORROW

Murals by a 19 year old artist, William Thompson, occupy a prominent position in the Federal Building at A Century of Progress.

Education Yesterday illustrates the limitations in curriculum and teaching methods, as well as a lack of modern facilities.

Education Today shows a more familiar school. Individuals are learning at every age, and America boasts of her millions in schools.

Education Tomorrow indicates that the pursuit of knowledge will probably differ radically, owing to the popularization of mechanical and scientific devices which are not yet within our reach. Unity of education will probably be obtained through a civic center.

Photos by U. S. Bureau of Reclamation

"Now When I Went to School"

By

WILLIAM ARLIS
RICHARDS

"YOUR schools of today aren't worth a tinker's dam. Here we are in the midst of a depression, and no one knows when or where it will end, and look at the schools. They are employing a nurse to visit the schools daily and even to call on sick pupils in their homes. They hire a physician to examine the children at the beginning of the term. They even vaccinate them in school. And as if that is not enough, the teacher lines them up every morning for 'inspection.' They look to see if their hands and necks are clean and look down their throats. Taxes can't come down until schools learn that it is their business to teach and not to look after matters of health. Now when I went to school, we didn't have all this foolishness, and we learned something. This health business has ruined our schools. Why, my boy was sent home merely because he had a cough."

The speaker, a man about 40 years of age, paused for breath. Being a teacher, I was interested, to say the least.

"What kind of school did you attend?" I asked.

"The best that America ever produced, the one-room rural school," he said heatedly.

In my work as an elementary school principal I often hear such remarks. Many who attended school a generation ago and have taken little time to keep themselves acquainted with school progress recall the old days and criticize the modern schools on the assumption that everything different is worse. One of the most severely criticized phases of school work is that of the health department.

It is not my purpose to ridicule the school of a generation ago. It served its purpose and served it well. The buggy and carriage did the same. But in recalling the points of the old schools, it is well to consider them from all angles. All my elementary school training was obtained in a rural school, and I taught in one, but I am thankful that my children do not attend one as they were conducted a quarter of a century ago.

My earliest school experience was attending a "school meetin'" a few days before the opening of the school term. A "director" was appointed or rather elected as an assistant to the township trustee for that particular school. The supply of firewood was contracted for, and various matters received attention. All went well until one of the younger patrons, perhaps they would have called him a "red" if they had possessed the modern vocabulary, made a motion that the lady who laundered the linen towels should be instructed to supply two clean towels each week instead of one as had been the previous custom. Then the fireworks started. It was my first time to witness a parliamentary battle, and its thrills outdid a national convention broadcast. At least I remember it better. The leader of the opposition was a man nearly 60 years of age whose children were out of school but who still attended the meetings. There were no ladies present, and he denounced the motion in no uncertain terms. He was a big man with a booming voice, and he closed with the words, "What are our schools coming to? You want a wash basin, you want soap, you want a comb and brush, you want a mirror, and now you want two towels a week, and there will only be fifty-six scholars in school. Now when I went to school we had a water bucket and cups and nothing else. We went to learn and not to primp. When we left school, we knew something besides how to comb our hair." When the vote was taken, the measure carried by a majority of one, much to the disgust of the minority.

The following Monday our school opened. In a bench in one corner of the room reposed a tin water pail and two tin cups. These had been carefully washed a few days before and would be washed no more that school term. This equipment was our system of supplying drinking water. The water was carried from an open spring in an adjacent pasture. The water never had a laboratory test for purity. Near the water pail was a tin wash basin and a cake of soap; above it hung the disputed towel. Near the towel was a mirror with a pocket containing a comb and brush.

The older boys were the water carriers. This was quite a privilege since they were permitted to go after the water during school hours. When the pail of fresh water arrived, it was passed up the aisles with the cups. Each pupil dipped the cup in the pail and drank what he

The water was carried in a tin pail from an open spring in an adjacent pasture.

wanted. He poured the surplus back into the pail and passed the empty cup to the next pupil. This was both for convenience and for economy. In a few days, dust and grime had discolored the pail and cups except for a ring around the tops of the cups which was kept "clean" by the lips of the pupils.

Since water was hard to get, washing of hands was not stressed. At noon the wash basin was filled, and all who wished to do so washed their hands in the same water. Needless to say, few pupils availed themselves of the "privilege." The hair brush and comb were used only by the adolescent group. To the younger pupils a ball game was of more importance than personal appearance.

In those schools we had physiology; of course we did. I remember our lessons well. We stood before the class and named every bone in the body and pointed to its location. In a mechanical way we recited "occipital, parietal, frontal" and ended with the metatarsi. Our teacher then asked us to name the various parts of the brain, and again we chorused "cerebrum, cerebellum, medulla oblongata." He would then ask, "Do we eat to live or live to eat?" and we perjured ourselves to give the required answer, "We eat to live." If we passed an apple orchard on our way home, we prepared for a ripe old age.

We never had a school nurse or a physician. A nurse was to us a person who wore white and lived in a hospital. A hospital was a dark mysterious place where people were cut up and seldom came out alive. The doctor came when one had typhoid in the summer or pneumonia in the winter. The exceptions were when a new brother or sister came or when a child fell from the hay mow and broke an arm. Vaccination was heard of occasionally if some soldier or sailor came home on a furlough and proudly exhibited his scar. Health was not a part of the educational goal. The goal was an intellectual person even if it took a physical wreck to make one.

When I "graduated" from the elementary school, I walked to high school in the next town, 3½ miles away. Health conditions were little better. During my high school days an epidemic of measles broke out. No precautionary measures were taken. We were never told how to avoid the disease or warned of its after-effects, but we were painstakingly taught that all Gaul was divided into three parts and that Ben Jonson did not like the Scots. When a pupil returned, usually too soon, he was worked overtime. Many of those pupils now wear glasses, because geometry theorems were considered more important than good eyesight.

The critics say, "Well, we lived over it." Certainly, at least a certain portion of us did. Our isolation was a safeguard which our children do not have. All our food except the staple groceries was produced at home. On Saturday afternoons we went to the village store, sold our butter and eggs and purchased our groceries. At the store we knew the family history of every customer for three generations back. Quarantine was unnecessary since a contagious disease ostracised the family for the full period. We made three trips annually to the county seat. In the spring we went to pay the taxes and purchase summer clothing. During the summer we had one day from 3 o'clock in the morning to 10 at night to attend the county fair. During our glorious day at the fair, we gorged on candy, peanuts and pink lemonade; and we spent the next three days recovering. Occasionally the recovery was helped along by castor oil. In the early autumn we went to pay the fall taxes, purchase winter clothing and perhaps a new school book. Our visiting was confined to a radius of from 3 to 10 miles, depending on the condition of the roads.

Where can one find such isolation now? Our country groceries sell bread baked in three different cities, butter made in two different cities and fruit grown outside the continent. Strangers making purchases no longer excite comment. In our little corner grocery in town, I seldom know half the customers in the store. They may be escaping quarantine in spite of the efforts of a capable health officer. Some of them may be disease carriers. No longer do we stay near home. Some of our pupils drive 60 miles to consult an eye specialist, though a few years ago they probably would not have

worn glasses. They may drive nearly as far after supper. On Monday mornings, it is not unusual to hear pupils describing a town 200 miles away which they had visited during the week-end. Many of their evenings are spent at the movies, perhaps sitting near some one who is none too careful about spreading disease.

Some may ask, "Has health teaching changed the pupil's attitude toward matters of health?" For answer I should like to give two examples. I was talking to a little girl in the primary room. She had made her first trip to a dentist and had a temporary tooth extracted. Now when I went to school, temporary teeth were pulled with a string or occasionally with pliers in the strong but none too skilled hands of the parents. I asked this little girl how she liked her dentist. Her disgusted reply was, "I am not going back there any more. He gave me a glass to drink from, and our teacher and the nurse both told us never to go uptown and drink out of a cup or glass. You know," she continued proudly, "we might get germs, and germs make you sick and then I would have to miss school." I afterward learned that the dentist had to show her the glass case and explain how the glasses were sterilized in order to be restored to a respectable standing with her.

The other instance was rather unusual. On one occasion I was in the office when Bill entered. It was nothing unusual for Bill to come to the office, but this was the first time he had come voluntarily. Bill was an aspirant for Dempsey's place, and he had an aversion to the entire curriculum. He said with a great deal of importance that he wished to see the school physician on his next visit.

I was rather curious and called him from his room when the school physician next appeared. Bill walked up to him and said, "Will you vaccinate me for a dollar? I have the money right here." The physician looked at him for a moment and then said, "Why certainly, but why are you so anxious?" Bill's reply came without hesitation, "Well, we visited the town of *X* last Saturday, and I saw a smallpox sign, and it might get down here." Bill's prediction was not a foolish one. Three weeks later, smallpox was in town.

However, that was not the end of Bill's case. A few days later his father called at school. There was some money missing at home, a dollar bill, and after careful watching he suspected Bill. I called Bill to the office, and he readily admitted taking the money. "Why did you do it?" his father asked sternly. Bill burst into tears and turning to me, cried, "I never stole nothing before, but old Tom Brown lives on our street and his face is full of pits because he had smallpox when he was young, and I ain't gonna be like Tom. I asked to be vaccinated, and Dad paid no attention." Bill was not punished.

Since children are now vaccinated against smallpox, immunized against diphtheria and given medical examinations and hygienic instructions, some persons may ask why the goal has not been reached. The goal has not been reached because we have only begun. In spite of all our health instruction, some children are not vaccinated because their parents "don't believe in such foolishness." Tonsils badly infected remain in for the same reason. Children come to school with bags of asafetida suspended around their necks to ward off disease. Recently a pupil suffered toothache for three days because he could not have the tooth pulled "until the sign was right." "Shows" put on by some patent medicine pedler on a vacant lot attract large crowds in which many of the onlookers are school children. Then superstition becomes jumbled with science.

A few months ago I was listening to a radio broadcast from a nearby station. From good music the program suddenly switched to an astrologer. The learned gentleman modestly admitted that he was able to answer any question if the correspondent sent in the birth date of himself or herself and that of the marital mate. Two of the questions were of particular interest. One was, "I have Bright's disease. I have quit all physicians and have turned to astrology for relief. Is there any hope for me?" The learned voice replied, "I have consulted the stars and can see no hope for you." In this answer he was probably correct. The next might have been amusing if it had not been so disgusting. It was, "I have been married for five years and am not yet a mother. Will I ever have any children and *(Continued on page 852)*

The teacher must not hesitate to explode a superstition.

Are They Ready for School?

By
BEULAH FRANCE

A good breakfast is a good start for the school day.

Alvina Lenke Studios

VACATIONS will soon end. School will call your children in from play. Are they ready? Are they physically ready? Much depends on the answer to this question. No child can make either the proper adjustments in school life or the proper progress in his studies if he is in any way handicapped by ill health. This applies to all children whether they are returning to school or entering for the first time.

While most parents today realize how much the child's happiness and success depend on good health, there are still those who for some reason neglect to take their children to the doctor for the annual physical examination before school opens. This examination is so vitally important that no child should enter school without it. If the precaution is not taken until after school opens, it may be necessary to delay the child's start or to interrupt his attendance while the required physical corrections are being made. This is not fair to the child. It may give him an entirely wrong impression about school. He may think that school has interfered with his pleasures. He may blame school for his visits to the dentist. He may find that his progress has been retarded when he reenters and may develop a feeling of resentment and antagonism because he thinks he has been left behind. To avoid this situation and to assure your child a fair start and continued attendance, take him to your doctor immediately, if you have not already done so.

A complete physical examination given by a competent physician may reveal minor defects which, if recognized and cared for immediately, will benefit the health. This fact has been so unquestionably proved in New York City that a system of cooperation has been established there between the board of education and the board of health. This system, perhaps in some modified form, might well be used as a pattern in other communities, either large or small. In New York City the law requires that every child entering school for the first time shall present a health certificate prepared in accordance with the regulations of the department of health and signed by a duly licensed physician. If any child fails to present this certificate, the parents are notified that ten days will be given for compliance with the law and that if at the end of that time the examination has not been made by a private physician the child will be examined by a medical inspector of the department of health. If this is done, a detailed description of the conditions found, with recommendations for corrections, is sent to the parents or guardians, who are urged to attend immediately to the child's needs. Under the Education Law the child must also be vaccinated against smallpox.

Whether or not the law requires your child to have a health examination before entering school, you as the parents of that child will be wisely building for his future health and happiness if you have such an examination made. The child may be too young to appreciate your kindness now, but in the years to come when he finds himself to be the owner of a gloriously

healthy body, a keen alert mind and an ability for the fullest enjoyment of life, he will indeed be grateful.

The doctor who gives your child this examination will probably start by weighing and measuring him. He will compare the weight and height of your child with the standard weight and height for the average child of the same age. This comparison will help the doctor to determine whether or not your child is normal for his age and what may be done if he is not. The doctor will listen carefully to the heart beat, probably both before and after exercise. Heart disease causes thousands of deaths each year. Many of these deaths might have been prevented if the heart of youth had been properly examined. If there is the slightest reason for special care of your child's heart, the doctor will tell you, and by following his directions you may help your child to grow up into a sturdy man or woman.

It has been said that most persons take the germs of tuberculosis into their bodies during childhood. These germs lie dormant and fortunately do no harm unless the resistance to disease becomes lowered considerably. But many children suffer from an incipient form of lung disease which is not recognized as tuberculous. A thorough physical examination plus certain tests will enable the doctor to tell whether or not your child has now or has had at any time an inclination toward an active infection. These annual health examinations reveal tendencies toward many conditions which through knowledge may be warded off but which may easily become serious if they are unrecognized or neglected.

Nervous conditions are often interpreted as irascibility on the part of a child. Your doctor will understand nervous conditions and will study to find the cause. Once the cause is known, nervousness can generally be cured.

Many children are nervous because of malnutrition. Malnutrition is not always the result of an insufficient amount of food; it may be caused by too much food of the wrong kind. It may result from a glandular condition which will also aggravate nervousness and which can be discovered only by a competent physician. Malnutrition may be the result of a digestive disorder which needs correcting, or of bad teeth which prevent proper mastication. No undernourished child can compete successfully, in school or out, with children who are robust and well nourished.

Your child's eyesight will be examined. Many children who have been considered backward in school have finally been discovered to have defective vision. The progress of a child so afflicted will be retarded and he can easily become discouraged or develop an inferiority complex. But if this trouble is detected before the child enters school, perhaps all that will need to be done is to ask the teacher to let him sit in a certain part of the room where he can best see the blackboard; possibly it will be advisable to have the child fitted with glasses. Often glasses worn early in childhood or during adolescence may be safely discarded later when the eyes have become stronger or the condition has been corrected in some way.

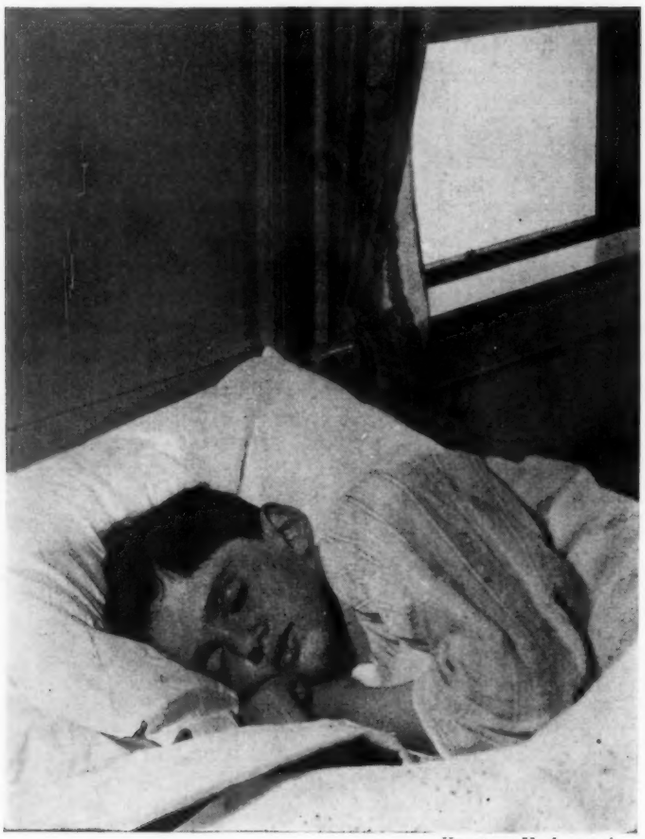
Eyestrain induces nervousness or other indications of ill health which, without the advice of a doctor, might be attributed to some other cause. Some children suffer from inflamed lids, from watery eyes or from frequent sties; others are cross-eyed or have eyes that turn out. In fairness to the child, these handicaps should be attended to while he is young.

Your child's hearing will be examined. Frequently children are found to be retarded in school by a slight deafness which has been the cause of seeming inattentiveness and apparent dulness. These children may be misunderstood by their teachers and reprimanded by their parents until they grow resentful toward the entire school system. A careful test of your child's hearing will reveal any slight deafness if it exists and make possible the early correction of the defect. If deafness is overlooked, it may increase with disastrous results.

Many children experience difficulty in breathing through the nose. This may be due to inflammation, to misshapen nasal bones, to tiny growths called polypi or to adenoids. Any of

Cy. La Tour

If cleanliness is taught early, it becomes a habit and there is no difficulty when school starts.



Keystone-Underwood

Every child under 10 years of age should sleep eleven hours each day.

these conditions, especially adenoids, will stop up the nose and force the child to breathe through the mouth. Mouth breathing provides an open doorway through which many germs may enter the throat and lungs. Whatever the nasal trouble may be, there will probably also be a tendency toward frequent colds. Colds are the cause of much absence from school and of many other complications. They are to be avoided. Whatever the doctor recommends for relief from nasal troubles should be done in order to make your child ready for school.

Diseased Tonsils May Work Havoc

Your child may have either enlarged or diseased tonsils. Enlarged tonsils often project into the throat and interfere with the breathing. They, combined with adenoids, may tend to cause the child's face to take on a stupid expression. Diseased tonsils may hold poisonous germs which are liable to cause throat trouble and which may be carried through the blood stream to various parts of the body where they will set up infection. No parent can remain ignorant of these possibilities and still do justice to the child. No child is ready for school until all such necessary corrections have been made.

Many children stand or walk incorrectly. The position in which the body is held and carried during childhood is most important since it largely influences the ultimate shape of the growing bones. Round shoulders and a sunken chest may encourage the development of tuberculosis. An erect carriage and a correct manner of walking, toeing straight ahead instead of toeing out, should also be developed early in life. Your doctor will study your child's gait and will advise you if it needs correction. If the trouble is found to be too deep-seated he will probably recommend a consultation with an orthopedic specialist. Childhood is the time to build a firm foundation for future health and happiness. Most of the foot troubles which develop in later life are directly traceable to early childhood neglect.

Perhaps the most common physical defect found among children is dental decay. A famous doctor once said that more than 80 per cent of all diseases had their origin in the teeth or the mouth. If the tiny crevices that precede dental decay are always filled before decay sets in, your child will never dread a trip to the dentist. These preventive fillings do not hurt, and teeth receiving good care do not usually ache. Modern children should rarely, if ever, suffer toothache. It is also more economical to visit the dentist twice a year with your child, or even more often if the dentist advises it, than to wait until extensive and expensive work needs to be done. Teeth which are allowed to decay give off pus constantly. This pus is absorbed by the child and does a great deal of harm to the growing body. It is a great mistake to neglect baby teeth; when a child first starts to school, he still has some of these temporary teeth; if they are allowed to decay, it is probable that the permanent teeth will come through already defective.

Protect Child Against Communicable Diseases

The doctor will not be satisfied until he has protected his little patient against the communicable diseases smallpox and diphtheria. Smallpox was once the scourge of the earth. It was as common a childhood disease as measles is now. It killed hundreds of men, women and little children, while those who did not die were often left blind, deformed and hideously scarred for life. However, the discovery of vaccination by Jenner changed all this. It could not entirely wipe out the disease, because it protected only those who were vaccinated. It took a long struggle to convince the world that smallpox could be prevented. To the shame of America there were 33,000 cases of smallpox in 1926; almost all of them occurred in states where vaccination is not compulsory. But finally most of the world has realized its value. Vaccination has now become so general that smallpox is quiescent. It is, however, still alive and ready to take up its abode in any one who does not bear the safety scar. Every child should be vaccinated before he is a year old and again when he enters school. Some doctors recom-

mend vaccination renewal every seven years for safety. Smallpox is indeed rare in a vaccinated person.

Typhoid can be controlled by antityphoid serum; it has been almost completely eliminated by this means from the United States Army where it once killed men by the score. Diphtheria can become as rare a disease as are these two, if only parents will insist on having their children protected. The protection should be given early; but in cases in which this has not been done, the child should not be allowed to enter school until he has had the three injections of toxin-antitoxin or the two of toxoid, according to the family physician's choice. Either method is usually dependable. These injections are given under the upper layer of skin on the child's arm, and even small babies rarely cry at the sudden needle prick. If toxin-antitoxin is used, one dose is given each week for three weeks; if toxoid is used, two doses are given each week at intervals determined by the doctor. Subsequent to the injections, several months must elapse before protection is certain since it takes time for the body to build up sufficient resistance to confer life immunity.

Ignorance Signs the Death Warrant

You should, as a matter of course, permit the doctor to include this prevention in his examination. But because diphtheria prevention has not been used for so long a time as has vaccination against smallpox, there are certain fathers and mothers who do not seem fully to realize its importance. They, oddly enough, say that they prefer to let their children contract the disease rather than to allow the doctor to immunize them. This must be due in every instance to ignorance or misunderstanding, for in many cases it is virtually signing the death warrant of the child. Perhaps these parents have been given false reports about toxin-antitoxin or toxoid. Such reports are still spread about vaccination.

The immunizing power of the diphtheria preventives does not become effective at once. In fact it cannot be absolutely depended on to prevent the child from catching the disease until six months after the last injection. Therefore, occasionally one who has had the final treatment will contract the disease within the next few weeks or before the six months have elapsed. This misunderstanding may be the reason for some of the false reports.

Present-day knowledge of diphtheria embraces its cause, its effects and its prevention. A simple harmless test determines whether or not a person is likely to contract it. It is now known that almost all children under the age of 10 are susceptible. With all this knowledge at our disposal, it is inexcusable that any child should be allowed to contract the disease, for by a series of two or three needle pricks all children at the age of 9 months can be made immune for life.

It will probably take your doctor more than an hour to give your child a thorough health examination. During this time he may be giving you some excellent advice and some concrete instructions about home care. It is quite possible that you will not remember each detail; hence, the following suggestions may prove helpful.

Up to the time he enters school, your child has, in all probability, spent most of his time at home. Mother, father, sisters and brothers have comprised the world in which he has lived. Suddenly all this must change. He is to enter an entirely new world, to meet new people, to face new circumstances and to combat new difficulties. If these new conditions create fear or rebellion within him, his health will be impaired. If he frets at school and dreads the daily absence from home, his nerves will be affected. So it is up to parents to build in the minds of their children a spirit of adventure into this new world before school opens. They must reason with the child about the pleasures he is to derive, pointing out how learning will make him able to be a real companion to Dad, how he has a chance now to vie with other children in a newer, bigger game, the game of success. They must encourage him in every way, especially when he comes home after the first day, tired, perplexed and perhaps a bit unhappy.

When Parents Go on Trial

But it is also well for you as parents to remember that you too must go on trial at the opening of school. Are you going to be understanding, patient and sympathetic? Are you going to be interested in each thing that interests your child? You must not coddle the children any more. If you do, they will be derided and laughed at by their playmates. You must not close your eyes to their mistakes. You must not defend them against their teachers. Indeed, you must cooperate with the teachers and help them to understand your children, so that the teachers in turn may be able to help you understand their problems. Your job is going to be a big one; are you ready?

Children in school, especially the youngest ones, are likely to tell quite freely what occurs at home. Parents must be most careful to set the finest examples at all times, for children not only are outspoken but are natural imitators as well.

No child should ever be offered a bribe. A child should be taught that to do right is not merely a duty but a privilege. He should never be threatened or frightened into school attendance. All such methods will prove most harmful to the physical as well as to the mental condition of the child. A child who is to enter school soon should not *(Continued on page 852)*

Removing Rural School Handicaps to Mental Accomplishment

Through play impulses, which are the greatest stimuli to expressive activity and learning, the race has developed its powers of mind and body.

By CARLTON PALMER

MANY children are severely handicapped in the process of mental achievement. In some cases, schools are still indifferent to such handicaps and fail to understand the sufferings, discouragements and wastes of such neglect.

School life represents a drain on youthful vitality. Records indicate that morbidity in children increases when they enter school and that it continues to increase as the school year progresses. If there is much home work, the tendency toward ill health is intensified. School life means an added effort on the part of the child and puts a strain on youthful health which must be counteracted by proper food, sunshine, sympathetic care, rest and happy play life in the open air.

It has been found that mental progress and physical fitness tend to go together. Children who rank high mentally are, in general, most fit physically. Children of good scholarship are seldom below the average in physique, while a large percentage of poor students are below average height and weight for their age. In her book "Gifted Children," Leta A. Hollingworth shows that gifted children are 1.7 inches taller than the average and that the average is 1.6 inches taller than that of the children who are below the average in mental ability.

Dr. Hanns Sippel studied these relationships in boys and girls from 10 to 14 years of age in the upper and lower schools of Germany and found that in physical development the less gifted pupils in the lower schools were nearly two years behind those of the same age in the upper schools.

"These results," according to Dr. Sippel, "may be taken to mean that the retarded physical development is responsible for the more limited mental accomplishment." He does not believe, however, that height alone is a valid test of proper development. He gives the results of Porter's researches in St. Louis on the height, weight and chest circumference of 35,000 boys and girls in the elementary and high schools, which show that pupils in an advanced grade were heavier and taller and possessed greater chest dimensions than did those of the same age who were a class behind. Again he points out that superior physical development is a possession of those mentally gifted and that a well developed organism is indicative of mental

ability. The odds are against the weak, undersized child.

Furthermore, the gifted children show proportional advantages for their weight and age in bodily strength and in motor skills. They are advanced for their age and weight, but they are often compared with older children in their grade.

That there is a direct relationship between a child's physical ability and his scholastic standing seems to be quite well established. Improved physical development leads to improved work in school.

There is also a significant relationship between mental ability and freedom from physical defects. Gifted children suffer less handicap from physical defects. After studying 361 of the poorest pupils and 387 of the ablest pupils in grades one to eight, C. L. Harlan reported that the occurrence of physical defects was 29 per cent greater in the poorest pupils than in the best pupils. Defects represented by bad teeth, diseased tonsils, malnutrition, impaired vision and hearing, tuberculosis of the lungs, fatigue and organic heart disease prevail in the order given. In his book "The Principles of Physical Education," Dr. J. F. Williams shows that physical defects are more numerous among rural children than among city children; this is especially true in cases of malnutrition.

Dr. Joseph Jastrow, in his book "Keeping Mentally Fit," shows that city children surpass the country children in brightness. The mental tests used consisted of work to which country children are exposed as freely as are city children. Yet the city children were superior in every test. Of 100 bright rural children, only 50 were as capable as the more gifted city children. There are fewer bright children in the country and proportionately more dull ones. Dr. Jastrow believes that city life offers larger opportunities for learning. There are more numerous impressions, and the environment is more stimulating. Perhaps the city children suffer from overstimulation; hence their mental superiority may not represent any real gain.

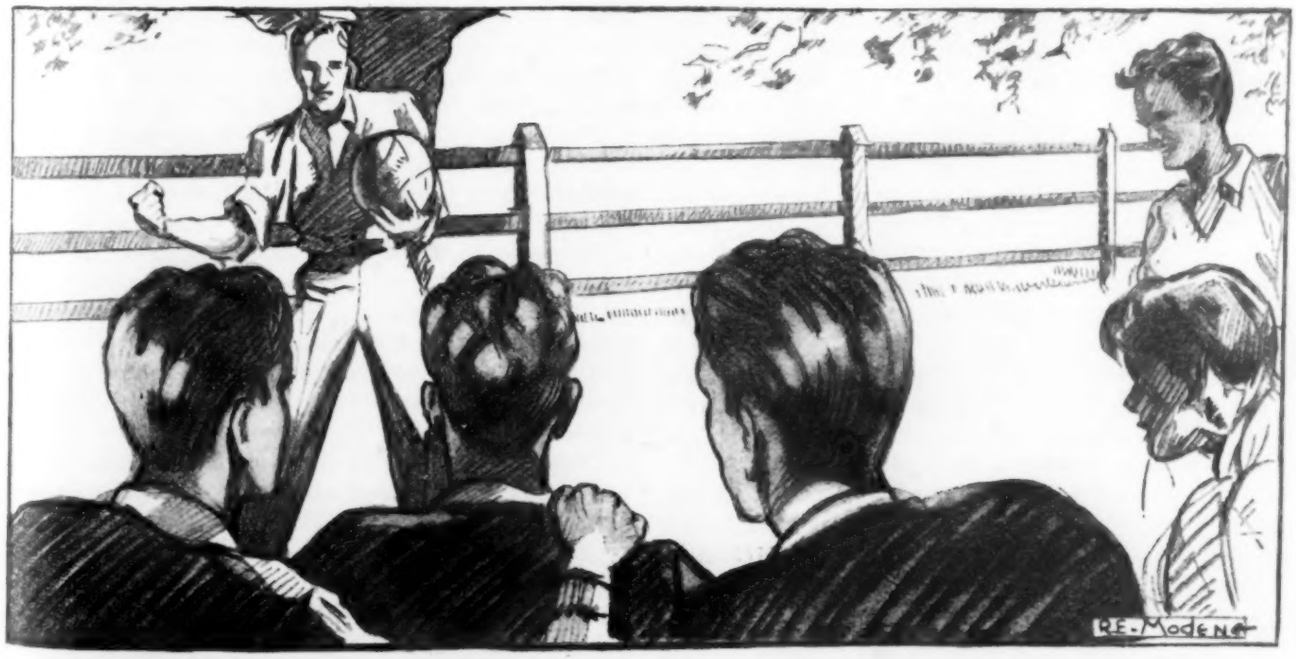
The schools, then, in order to provide the best conditions for learning and to reduce pupil retardation and waste, face a threefold problem:

1. To provide the conditions and stimuli for normal growth and physical development, which are fundamental to intellectual progress.

2. To remove the handicapping drains, or physical defects, which cause fatigue and low energy.

3. To provide the stimuli for mental achievement enjoyed by city children without the harassing effects of city environments.

In regard to the first responsibility, normal growth and bodily development, which are basic to mentality, an authority points out that both mentality and physique are controlled by nutrition, and as malnutrition is more common among rural children than among city children, it may be a formidable handicap to mental accomplishment. Undernourished children are pale, anemic, listless and irresponsive; they are easily fatigued; they are always tired. They make adjustments with difficulty; they are often irritable and nervous, and they are timid and backward. This condition prevails in more than 30 per cent of rural school children. Good nutrition is a fundamental factor influencing bodily growth.



Play activities, skilfully directed, can do more to give rural school children the stimulating conditions for learning that are now occasioned by city environments than can any other single measure.

Roux made it clear that nutrition alone was not enough for the development of an organ, for an organ grows in power and strength as a result of increased function. Such increased function can come only from the stimulation of muscular activity. Vigorous play life makes for strong organs and a stable nervous system.

Physical education has special significance during the years of growth, for it is then that the inherent capacities of the organism are in need of development. Our racial impulses for a great variety of play activities, involving running, jumping, chasing, climbing and throwing, provide children with the innate enthusiasm for muscular activity that will develop their bodies. If these opportunities are neglected, both physical and mental powers will lag behind.

Physical defects which drain youthful vitality, cause fatigue and hamper pupil advancement in general are hazards of development. They are the result of neglect and indifference, and they require medical and surgical attention for their removal. Periodic medical examinations disclose these handicaps as they arise; they should then be removed at the earliest opportunity.

The environmental stimuli to learning, to mental achievement, appear to be more numerous in the city. How may these conditions be made available for rural children? I shall discuss only one factor in the stimulation of growth, satisfactory play life, for I believe it is the most vital. If stimulating, satisfying play life can be provided for rural children of all ages, some of the worthiest conditions for mental achievement can then be provided without the disadvantages of city environments.

Learning means self expression, doing things in cooperation with others. Play impulses are the greatest stimuli to expressive activity and learning. Through these activity drives, the race has developed its powers of mind and body. When learning is tied up with these racial habits, it becomes enjoyable, satisfying and intensely interesting. Play is the root of all "learning by doing." A child who does not respond to play needs attention. So powerful are the inherent play drives that the play interests of a child are a good measure of his physical and mental development.

John Haynes Holmes warns against a playless life for children. He urges study of the children who have toiled and slaved in factories from their youth. When they are free from their labor at the end of the day, they sit around like old men and women, inert and unresponsive. They have never experienced play and do not know how to play. Consequently they are stunted in mind and body. They are mentally sluggish and spiritually dead; they have never felt the joy of expressive activity. They were never young, for they have never played. They lack the inner urge to do, which is the greatest stimulus to the powers of mind and body.

How can play be utilized in the education of youth? First, opportunities may be provided for play; this alone awakens the faculties of the mind and stimulates the powers of the body through the absorbing activity. These experiences, however, must be socially and morally worth while. The child must early be led to build socially acceptable traits which need not be suppressed or changed later. A tendency to cheat or bully, if allowed to develop, must be thwarted later, and the process usually occasions much unhappiness. The play leader teaches the children what to play and how to play; he assures social and moral growth. Impulses are strong, and many are selfish and personal; some need redirecting, even curbing, not by fear and punishment but by setting worthier goals without losing the natural joy and spirit of play. There are the timid, the suppressed and the rebellious. When children are left to their own efforts, these antisocial qualities tend to grow and often destroy personal efficiency and happiness. An understanding play leader can point the way to right emotional attitudes of friendliness, helpfulness, and appreciation of the rights of others. Sound morals will come by worthy example and fine association. Leisure time will serve as an occasion for enjoying the play activities learned at school. Through it all will be seen the gradual awakening of the child's whole personality.

Dr. William Burnham gives some valuable suggestions for child training which play activities may well provide. He believes that children should express their impulses freely in play and work, give vent to their feelings and desires in exploring, in working in cooperation with others, in helping, sacrificing and serving. Such control comes by guidance, not by repression. They should work with concentrated attention and carry out their projects wholeheartedly. They should perform their tasks in a social setting with others. Child life is a struggle between basic impulses and the need of certain control. To secure control, children need energy and freedom from fatigue and other handicaps. Children shape their behavior after examples. They learn to work, play, and act out their ideas and feelings by observing those about them. Youth loves action. The best teaching will utilize activity and direct behavior through sympathy and praise in lieu of censure and blame. These conditions of learning are most evident in the play life of youth.

Play activities, skilfully directed, can do more to give rural school children the stimulating conditions for learning that are now occasioned by city environments than can any other single measure. The stimulus for learning must come from within. The child's natural enthusiasm is for play. If his learning is tied up with his play interests through active leadership, educators will soon be able to boast of the results.

The MOTHER and the SCHOOL

By

Regina J. Woody

HOW often the mother of a mischievous, unscholarly or undernourished child finds that the word teacher conjures up a mental picture of an unsympathetic spinster. However, if her approach to the school and her child's problem is only reasonably courteous and sympathetic, she soon finds out how wrong she is. The teacher is not always at fault, if a child either cannot or will not learn. Possibly such a child needs to be given a thorough medical examination; but more often the problem will resolve itself into one which may be readily adjusted by cooperation between the mother and the school.

All too often the busy mother sends her child to school, and she becomes occupied with the demands of younger sons and daughters, the house itself, and the preparation of a nourishing hot luncheon. The fact that Polly Anne is a problem child, excitable, poorly nourished and impertinent, is overlooked with a tired sigh until a note from the teacher calls attention to the fact that Polly Anne is not going to be promoted.

This note is liable to be the signal for a spanking for Polly Anne and a violent onslaught on the harassed school by an outraged parent to whom report cards containing low marks have formerly been merely an irritating monthly occurrence. This interview between overwrought mother and Polly Anne's perturbed teacher is liable to be a difficult one, for mothers so often believe that teachers are unfair to their children.

It would be Utopia, perhaps, if mothers could realize that the average teacher is not vindictive. There may be teachers who are; doubtless there are mothers who are, but the general run of teacher material and mother material is not given to meanness. Therefore every teacher will promote every child she can because it is to her credit to promote her pupils if they can do the work of the next grade. Also, if a teacher should dislike a child—and teachers are human—it is hardly sensible to assume that she will refuse to allow that child to go into another room where he will no longer bother her, and that she will, instead, keep him in her own grade, spoiling her record of promotions, giving herself an unsatisfactory pupil for a second year and making bitter enemies of that child's entire family and all his relatives. If a teacher keeps your child back, rest assured that she does it solely that the child may grow in stature and education before attempting a course of work in which she knows only too well that the child would ultimately fail.

A note from teacher is liable to be the signal for a spanking for Polly Anne.

Not all children of the same age are of the same height and weight; neither do they always approximate each other mentally. Some little minds are quick, retentive and happy. Others learn only by the teacher's most intensive efforts, forget with appalling promptness and seem to live continuously in a gloomy fog of doubt.

Therefore all children of the same age group must not be expected to be kept together. It is fine for the 8 year olds, the 10 year olds, and the 15 year olds to be in their proper age groups; but if, for some reason, one 8 year old is small, delicate, undernourished and slow, he will be far happier in second grade with the 7 year olds. Even if by tutoring, home study and careful diet he could be kept with the third grade and the other 8 year olds, the mother should ask herself seriously whether this extra work,

Never allow a child to rise late, dress hurriedly and dash off to school without breakfast.

fatigue and supervision are not too heavy a price for so delicate a child to pay, simply that he may remain with his own age group.

Undoubtedly, mature thought will decide that it is too great a price, and the child will be allowed to slip happily back a grade. If perchance the child is tired all the time, let him stay home and play outdoors an extra day a week. He may not admit fatigue, but if he is nervous, if he races and screams, has tantrums, fights sleep and rejects nourishing food, craving candy and ice cream instead, rest is most surely what he needs. He needs a vacation on a farm, if possible, far from the madding haunts of other vacation-seeking children. He does not need handiwork, books or lessons; rather he needs rest and quiet, wading or bathing in moderation, plenty of sleep and good nourishing food, with an abundance of milk, fresh fruit and vegetables included in the diet. The mother should not make any effort at formal education. A year of this life, if necessary for the child's health, is hardly likely to retard his education. It may, however, have exactly the opposite effect; instead of being a problem child, this little child may become a healthy, normal young person who has gained weight and poise to the point where the coveted double promotion will be graciously accorded him; thus he will be placed back again with his old friends, a happy, well balanced child, able to keep up the pace in lessons and in play, instead of being the unhappy class dullard.

Suppose, however, that you have a healthy youngster of 8 who, having lived at a great distance from school, did not enter the first grade till he was several months past 7. Have you the right to refuse him the double promotion the school suggests because you feel he should not be overtaxed? Consider a moment. He is a head taller than the 7 year olds with whom he is associated. He towers above them, his slightest movement having the almost Alice in Wonderland quality of knocking these babies about like a pack of cards. He reasons excellently, as well as a 9 year old perhaps. He is bored with the type of games and play that the little ones enjoy, yet perhaps he is not extremely bright. He has a good mind but he has not yet applied himself seriously to learning. He is well up to average weight for height, plays happily every spare moment, sleeps well at night for eleven hours, is not nervous, and brings a voracious appetite to the table.

What then, if he should have to tutor for a few weeks? What if he should have to do a bit of home work in the afternoons? Would it not stimulate him? Would it not make him happy to be with his own age group, playing games and racing against his equals or his betters? Would it not be preferable for him in the long run to make this effort, even if he does have to work rather hard and to see his cherished grades drop from excellent to good? Of course it would, for here is a child who as surely needs the double promotion as poor little Polly Anne needed the right to relax and rest from the constant stimulation of trying to stay with her own grade. Therefore if the school says, "Keep Betty back a year" or "I think it would be wise for Billy to skip the fifth grade," let that advice prevail, unless you and the child's father and the family doctor truly feel that it should not be allowed. If you come to this conclusion and you have a case to present, do it as logically and as unemotionally as possible to the teacher and the principal, knowing that the school has only the well being of your child at heart and is anxious to help you and the child to a true education.

If you want your child to get along well in school during the morning session, allow him plenty of time to wash and dress leisurely, and give him a good breakfast and time to eat it without hurrying. A simple breakfast, one of cereal with thick cream, a glass of orange or tomato juice and a glass of milk, will carry the most active child comfortably till lunchtime. An elaborate menu is unnecessary, though a change of cereal every day in the week is welcome and is not expensive, if the packages are carefully closed and stored on a dustproof shelf.

Never allow a child to rise late, dress hurriedly and dash off to school without breakfast, either because he says he does not want any breakfast or because he does not have time. Neither excuse should be tolerated. It is the mother's job, not the school's, to see that the child has a good wholesome breakfast. If perchance your child does dash to school one morn-

ing without breakfast, do not ring up the principal of the school and demand that breakfast be served him at once because he will otherwise surely have a headache. Such a headache, if he has it, may be a lesson to him and make him desire to eat breakfast the following morning. Mothers are often more foolish in what they ask of the school than their children would be in similar circumstances. Although one day's omission of breakfast is a small matter, do not allow a child to make a habit of it. The growing child needs health-giving hot food to break a fourteen hour fast if that child is to do a good morning's work.

If it is possible, a hot lunch with meat, potatoes, fresh vegetables, milk and bread and butter is ideal for the growing child. The child who is exceptionally stout should be taken to a physician; his meals should be prescribed for him so that he may have enough calories for strength but not enough to make him fatter. The diet for the growing child who needs to reduce should not be prescribed by any one but a reliable physician. Much harm has been done to some of the women of America by absurd or harmful dieting fads; such harm should not be allowed to come near the youth of this country. All diets, whether for reducing or for increasing the weight, should come directly from the doctor and should be regulated by him. If the mother is unable to provide the hot noon meal, an excellent substitute may be taken in a lunch basket containing egg, meat or cheese sandwiches and a thermos of cocoa, milk or soup. If the school has a cafeteria, the child should be advised always to choose one hot dish, one vegetable and one glass of milk. Ice cream or sweets afterward will then be truly acceptable to the young stomach.

Suppers after such a noon meal can well be light, with cooked or dry cereal and fruit for the younger children, and eggs in every fashion for those a bit older. Escalloped vegetables are delicious as well as nourishing. Muffins or biscuit, stewed fruit and custards are sure to be welcome foods at the close of the day, and they are also most acceptable for their dietetic value.

It would help a great deal in the contact between mothers and teachers if mothers realized that a teacher fits herself for a teaching position, not for one involving the duties of nursemaid. Even little children may be taught to unbutton a coat, to hang up a hat and to fasten overshoes together with a large clothespin clip. Children's outer garments should be clearly marked with the full name in name-tape of the largest size. Ordinarily a 4 year old can learn to recognize his own name-tape after about five minutes of careful scrutiny.

Mothers often forget that forty pupils can, on occasion, lose eighty overshoes. And berets, with their eternal sameness, present a staggering problem, if they are unmarked. If a child can and will hang his own clothes on a hook, sit down and stand up, pleasantly obeying orders when he first arrives in school, because home influence has taught him these simple things, he is well on the way to being a well adjusted and happy child.

Parents should not telephone to the school and demand that a child be called to the phone. At most, if the matter is serious, he may be excused and sent home at once; that is enough. Teachers are at school to teach, not to wait on or run errands for the pupils. Do not call frantically, as did one mother, demanding that she be allowed to speak to her child, only to blurt out on refusal the command that the principal tell Rachel at once that her dog had come back.

The mother who will call on the teacher with an open mind and an interest in education will find herself enthusiastically welcomed; but if she appears on the second day of the first school week in September and insists on being assured that Catherine will pass creditably into the next grade at the end of the year, she must not expect to be encouraged to visit school. A mother is well advised to take an attitude of tolerant understanding when her child is praised and to

Mothers often forget that forty pupils can, on occasion, lose eighty overshoes.

refrain from anger when the child is criticized. Investigate rather carefully when the child is blamed and pursue a policy of watchful waiting if the charge seems unwarranted. It may even be well to seek the services of the family doctor or the school nurse. A child who cannot see the letters of his book or the words on the blackboard will never learn to spell; and a child who is tone deaf will never sing in tune, while one who does not hear the rhythm of the music, whether the defect is mental or physical, can never march in step. But an oculist can provide glasses for the child who cannot see; a singing teacher can do wonders with the tone-deaf child, and a dancing teacher can help the youngster to hear the beat of the music, while an otologist can often help the deafened child to hear. In this way many an inattentive, sullen pupil has been helped to appreciative attention once he truly hears the words of his teacher, or sees what she writes on the blackboard.

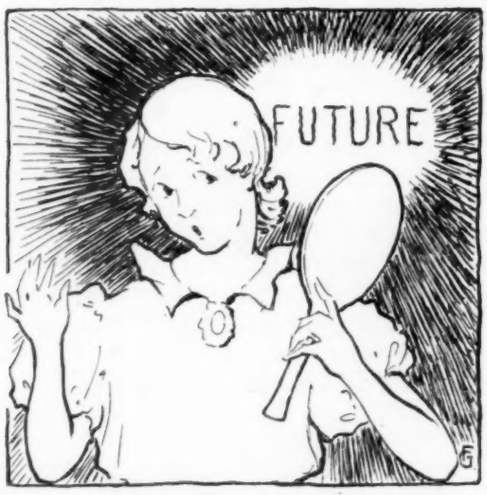
The teacher will most surely cooperate if she is given a chance. From the first day of school, let your child realize that his teacher is one single part of the great educational system of this country and that if he himself is to learn, he must will to learn; without that desire even the ablest teacher cannot give him a good education.

To be sure, a teacher can teach forcibly. Private tutors sometimes actually spoon-feed their young charges; they often even succeed in getting them to pass college board examinations fairly creditably. But what of those pupils when they are once on their own? Almost invariably they flunk out, for they believe that education is a passive process. It is not; as in baseball or football, the children themselves must take an active part if they are to get good results. Before a pupil can learn anything of intrinsic value, he must have a great driving curiosity, a real desire to achieve knowledge for himself. Once children have that interest, their progress in school will be good, their teachers will enjoy them, and parents will be able to grin delightedly when a report card arrives.

It is not the erratic genius whom teachers enjoy teaching but rather the normal, healthy, well balanced child. For it is this child who on leaving school or college is well fitted, mentally and physically, to tackle the big problems of life with an open mind and a courageous heart.

Hallowe'en Superstitions Have Neither Charm Nor Terror For Hygeia Readers,

For in the October Issue, as Always, Hygeia Holds Up the Mirror of Truth



In a new department, "A Housewife Looks at the Committee on Foods," *Doris W. McCray* explains to housewives the work which that committee of the American Medical Association is doing in their behalf. Many women have wondered about that little A.M.A. Seal of Acceptance which is appearing on certain packages on the grocers' shelves. Why, they want to know, does it appear on some brands and not on others? What does it mean? Has it any significance for the average housewife? Mrs. McCray, who is well known to *Hygeia* readers, will answer those questions for them. Each month she will report the committee's findings in regard to certain foods—findings that are of vital interest and importance to the housewife, in that they make it possible for her to know what foods are good for her family—and why!

In his encouraging article, "Salvage," *Frederick Bradman,* a patient who has recovered from poliomyelitis, tells how a body, "once maimed by the ravages of disease, can once again assume its burden and carry on."

"Yes, Mother Sanford says Jimmie's father was just like this when he was a boy, and 'worm medicine' cured him; so I got some 'worm powders' for Jimmie. Between us, his father and I managed to get them all down him, but really I can't see any improvement." Such statements, made by fond but deluded parents and based on their unscientific diagnoses of symptoms, amount almost to superstitions. That such ignorance can lead to incalculable harm is clearly shown by *Dr. R. R. Rogers* in his article, entitled, "Worm Powders."

"Somewhere in America every two minutes of the day and night a home is burning. . . . It would almost seem that an evil demon is abroad in the country, a demon much like the Fire Spirit of ancient Indian legend. . . . Perhaps, after all, the evil Fire Spirit is just another name for destructive human carelessness," writes *Curtis Billings,* who enumerates fire hazards, tells how to avoid them and what to do in case of fire.

"A giant airplane came roaring through the sky. The passengers were a couple of scientists, bent on man's everlasting conquest. They rode with possible disease and death; but by this ride they made it possible to avert the presence of yellow fever on American soil." How this was accomplished is told by *Alan Bradford* in "Wings of Death."

Among the many other interesting and informative articles will be "Heart Disease Then and Now: An Increasing Challenge" by *Dr. Paul D. White;* "Safeguarding the Athlete's Health" by *George R. McCormack;* "Keeping the Underweight Child in School" by *Regina J. Woody;* "The 'Demon' Housekeeper" by *Dr. Lee D. Cady,* and a school physician's discussion of "The Health Examination of the School Child."

SONG FOR ANY DAY
WELL, THERE'S QUITE A LOT TO DO, FROM THE TIME THE DAY BEGINS UNTIL THE DAY IS THROUGH. THERE'S GETTING UP—
8:00 A.M.
AND WASHING AND SPLOSHING
8:30 A.M.
9:30 A.M.
AND EATING
11:00 A.M.
12:00
THEN THERE'S LUNCH WHEN I MUNCH EGG AND MILK AND CUSTARD AND A SUGAR BUN.
2:00 P.M.
AND THEN A LITTLE PLAYING IN THE SUN.
4:00 P.M.
AND NAPPING
AFTER THAT MORE PLAYING
6:00 P.M.
7:00 P.M.
AND SUPPING
AND THEN I ALWAYS LISTEN TO A FAIRY TALE (BY MUM)
7:30 P.M.
7:45 P.M.
AND I GET SCRUBBED
8:00 P.M.
AND THEN THE DAY IS DONE
POEMS & PICTURES BY RIGGS
THEN MY TEETH GET SCRUBBED
GOODNIGHT.

DENNY, the Elusive

By JOSEPHINE BORING

MY FIRST meeting with Denny was on a rainy March morning. Rain between 8 and 9 a. m. is hard on the children of Baxter Street School. None too well protected from the elements at any time, they are likely to arrive on a stormy day drenched and shivering; and, in a neighborhood where half the mothers go out to work, children come to school early.

On the morning in question I was on hall duty, and on such a day, hall duty means looking after scores of children in the lower hall, crowding the new arrivals in nearer the radiators, stopping quarrels, seeing that wet coats, hats and umbrellas are properly cared for, and striving with indifferent success to keep the squirming mass of humanity somewhat quiet. It was with a sense of unreality, then, that I felt a sudden hush fall on the group. Two strangers were pushing their way toward me, and their presence had checked for a moment the chatter and laughter. I looked into the face of a little shriveled woman who met my eyes with an expression half challenging, half entreating. At her side stood a plump, round faced boy, whose big blue eyes won a place in my heart at once.

The gong sounded, and the children scattered to their rooms while I directed mother and son to the principal's office on the floor above. There I found them a little later when Miss Newman, the principal, sent for me.

"Miss Allen," she said to me, "this is Mrs. Corrigan, and this is her son, Dennis. I am assigning him to your room."

"Do you teach the sixth grade?" The little woman spoke quickly, and again I felt that odd mixture of challenge and entreaty.

"No," I said, "the fifth," not deeming it necessary to add that it was a low fifth, or that I wondered why this boy who appeared to be so bright should be assigned to a low division.

"I wanted her to try him in a sixth grade," said Mrs. Corrigan, nodding toward Miss Newman. "He don't do very good in school. He don't like it. I thought maybe trying the sixth might get him interested. He's old enough for it." A note of pleading crept into her voice, but Miss Newman was unmoved.

"Dennis has been in two schools already this year," she explained to me. "Naturally he doesn't get along well when you move so often," she added to the mother, who, evidently seeing that I was not to be of much help to her, had settled wearily back into her chair.

Meanwhile Denny had turned indifferently away to stand looking down into the rain-washed street. His right hand was making regular journeys to and from a sagging coat pocket. Mrs. Corrigan's attention was attracted by the soft rustling of a paper bag as the boy's fingers explored its depth for any last crumb of food it might contain.

"Denny," she said sharply, "are you eatin' again?"

"No'm," said Denny, turning innocent eyes on her. "I didn't have but a little, and it's all gone now." For proof he offered the limp, chocolate-stained bag.

"Denny's like his pa that's dead," explained Mrs. Corrigan wearily but with something of pride. "He always did love to eat. It's hard work, though, supportin' a boy that wants to eat all the time. But he sells some magazines and makes a little money for himself."

"Of course," began Miss Newman, drawing us back to the subject of Denny's classification, "if we find he can do more than the other children in Miss Allen's class, we shall give him a chance in a higher grade. You would rather have him put up after a trial than down, I am sure."

It was the old plea to the dissatisfied parent. Mrs. Corrigan had heard it before. "You won't put him up," she said. "They don't ever." Then, defeated but unconvinced, she rose to go.

"Wait a moment, please," said Miss Newman. "I want you to meet Miss Phillips. She will teach part of Denny's work. Will you send her up?" she added, turning to me.

At Mary Phillips' door I said, "Run up to the office and see what Miss Newman has for us."

Then I went into my own room and looked about, planning where I should put Denny. I might as well have spared myself the effort of planning, for after the boy had spent half a day near the middle of the room I was convinced that his hearing was so poor that the seat nearest my desk must be vacated for him. Poor Denny of the gentle voice, the friendly smile, the calm blue eyes! He was another underprivileged boy trying out the third school home in one year and living with an overworked mother in two basement rooms under the corner bakery. Something worth while must be done for Denny, I told myself with a lift of the heart and a thrill of enthusiasm, knowing well where I might turn for expert help and encouragement.

Mary Phillips has been my inspiration since that day when I was sent out, a half frightened yet wholly confident substitute, to observe her

I looked into the face of a little shriveled woman who met my eyes with an expression half challenging, half entreating.

teaching. If there were a harder school in town than the Baxter or a harder grade than the fifth, Mary would have asked for it. For four years we have shared the high and low fifth, changing classes twice daily. During that time many an impractical theory of mine has gone down before facts gathered from my observation of real teaching, mostly Mary's.

Together, then, we went to work on the problem Denny offered. If the boy fitted into his class program, it must have been with no more conscious effort than that made by a piece of rubber adjusting itself to pressure. He merely followed the line of least resistance and, since everything was planned to make right-doing the simple and natural thing, he was not often in open rebellion. But there were two points on which he failed to adjust himself, and one of these was highly vital. He did not learn, and every day he grew to be more like "his pa that's dead," for Denny loved to eat. At almost any moment he might show signs of eating, of having eaten quite recently or of intending to eat.

"I don't reach him," said Mary. "I can't interest him, and I don't believe he has spent one half day in the classroom without eating something."

"There was one," I corrected. "The morning his mother brought him he ate all his candy in the office." Then I added in despair, "And he looks so bright!"

"I'm not so sure," said Mary. "There doesn't seem to be anything at all back of those blue eyes. He's the kind of child some supervisors delight to call on. His hand is always up, and what he says when called on never has a thing to do with what he was asked. But there must be something that will interest him. We'll find it yet."

Another week passed. Then, "I've found it," Mary said with enthusiasm. "It's nature. Denny loves the outdoors."

"Really!" I said. "Tell me about it."

She laughed and told me of the oral geography lesson she had been conducting in my low fifth. She was telling them of Ireland when she saw Denny's hand waving, his face aglow with interest. His family tree had grown in Ireland, and Mary was sure she had somehow touched a real interest. Smiling her approval, she called his name.

"Miss Phillips," he drawled, "the toads is out."

A few of his classmates giggled delightedly, but even in this group, where diversion meets with a high degree of approval, most of them turned looks of disgust on the speaker whose wild replies had, by this time, become too common to excite much interest.

Mary, ever eager to find a point of contact, held to her smile of encouragement and said, "Are they, Denny? Have you seen one?"

"Yes, I seen two last night when I went down to the river. I'm goin' again tonight. Want me to bring you one?"

"We could study it here in the room. That would be interesting," Mary assured him.

The next morning Denny shuffled into my room at 8:30.

"Did you bring us a toad?" I asked.

The blue eyes met mine with a puzzled look. Understanding and indifference came together. "No'm, I forgot."

With a studied nonchalance Denny sauntered about, tossing onto the girls' shoulders a small turtle.

"Then why are you up here? You know you are not to come in till 9 o'clock when the weather is good."

"Miss Newman sent me." A trace of sullenness was appearing now.

"Why? What were you doing?"

"Nothin'. Bobby Irving bumped against me. It hurt him a little bit, and Miss Newman sent me in."

"Oh, I see. How long do you have to stay in?"

"Recesses, all this week." He studied my face with evident hope for an advocate with Miss Newman.

I was ready to give up, but Mary had a new theory; and during the rest of that week we studied Denny as never before. No effort was made to keep him working while the other pupils were on the playground. He spent the period staring out of the window, varying that monotony by taking an occasional nibble at the candy with which his pockets seemed daily to be freshly supplied.

Friday afternoon we called him to the west window and, as best we could, we examined his throat and nose.

"I'm just sure I'm right," Mary said when he was gone. "Let's see Dr. Sherman tomorrow."

Dr. Sherman was a throat specialist who had given much service to children in the poorer schools. From his office we went to that of our friend the superintendent of nurses in a hospital close at hand.

Monday we called on Mrs. Corrigan. "Take Denny to a doctor?" Plainly she was alarmed at the suggestion. "Why he ain't sick. He never et heartier in his life."

"Not sick in that way," Mary explained patiently, "but Denny is inattentive; he is a mouth breather; he doesn't hear well, and he doesn't learn as the other boys do."

"You don't think a doctor could help that, do you?" Then with growing alarm, "You don't want to do nothin' to his head?"

"No, no," I protested, "it's his nose and throat. If they were well, I am sure he would not be such a problem."

"He's a problem, all right," she agreed, "but I'm used to him. He's just like his pa that's dead."

"But you would be glad if a doctor could help him, I am sure," Mary urged.

In the end we won a reluctant consent, and arrangements were made for us to take Denny to Dr. Sherman on the following Monday.

Looking into the boy's chubby face Monday morning, I felt a return of my old enthusiasm. After all it was a privilege to help such children. The teacher's work was worth all it cost. There was pure joy in doing anything that might help to lift the cloud of dulness that obscured poor Denny's outlook on a world none too friendly at its best.

Returning to my room a few minutes after dismissal that afternoon, I met Mary coming out of my door.

"Where is Denny?" she inquired anxiously. "I hope you didn't forget to keep him."

"Isn't he in his seat?" I asked a little weakly. "I left him there."

But Denny was not in his seat, or in the cloak room, or in the corridor, or in any of the classrooms. Perplexed and irritated, I called off the appointment with Dr. Sherman.

Denny was still missing Tuesday and Wednesday. We planned to go to his home in search of him if he did not appear by the next day. Thursday morning I looked out of my window to discover the cause of wild screams of mingled fear and delight that were rising from the playground. With a studied nonchalance, Denny sauntered from one group of girls to another, tossing into their laps or onto their shoulders a half grown box turtle, which he drew back with a string fastened to the edge of its shell. I left the girls to suffer for a moment while I went across the hall to call Mary.

"It's nature after all," I said as she looked down on the scene. Then, "Denny," I called sharply, "come here!" He dropped the wiggling pet into his pocket and came. Arriving at my desk he produced a note explaining that a bad headache had kept him at home for two days. It did not make any reference to his failure to see Dr. Sherman. Questioned on that point, he was disarmingly frank.

"I had a headache all that day too. It was awful bad."

"But how did you get away?" I asked.

The blue eyes studied my face a moment before he replied. "I went down the fire escape. I didn't think it would hurt just once and," he added reproachfully, "you never let us."

"But why didn't you tell me you wanted to go?"

"'Cause I knew you'd want me to go to the doctor, and I didn't feel good.

"Don't you think that might have been a good reason for going?"

"Mebbe," he replied, evidently a bit puzzled at the turn of the talk. Then with the old winning smile, "I'll go today if you'll go with me."

And so we went.

"You are right," Dr. Sherman said after his examination. "An operation would certainly help him. It might make a different boy of him."

Mrs. Corrigan weakened when the moment came for her final consent, and it took so long for her to make up her mind that the Saturday following the close of school was set for the day on which Denny was to be made into a new boy.

It was only in response to Mary's urging that I consented to go to the hospital that morning when a thousand other interests were demanding my time.

"Everything is so well arranged that there is not the least need for us," I urged. "Mrs. Corrigan has promised to have him there at 9 o'clock. She understands that he must come without his breakfast. All she has to do is to see that he gets there. Everything will be out of her hands as soon as she meets Dr. Sherman."

"And when everything is out of her hands, she will need us," Mary said. "She is liable to make a scene of some kind if she has to wander about there alone while Denny is in the operating room. We ought to be with her."

So it came about that on the first day of my summer vacation I found myself getting ready to set out on this mission. Then came a long distance telephone call delaying me fully half an hour. By the time I reached the corner where I was to meet Mary she had gone into a store to call me. I went to another to try to call her. Finally we found each other and, nearly an hour late, came into the waiting room of the hospital. We had expected to find Mrs. Corrigan wandering distractedly about, but instead she stood in troubled conversation with Dr. Sherman. Her face lit up as she saw us enter. "There's his teachers," she said hopefully. "They'll know where he is."

"Isn't Denny here? Don't you know where he is?" We were both talking at once, and with a sigh of despair Mrs. Corrigan dropped into a chair.

"He was here," she explained weakly. "I don't know where he is now. He's only been gone a little while. Oh, I wish you'd a-come sooner. You could a-helped me keep track of him. He's only been gone a few minutes. I thought he was just walking up and down the hall. Somethin' must a-happened to him."

And while we all stood about and wondered helplessly what should be done, Denny sauntered in.

"Boy, weren't you told to wait right here?" Dr. Sherman demanded.

"Yess'um, I mean, sir," said Denny meekly.

"And then you keep us waiting while you go out to the street to play."

"I ain't been in the street playin'," answered Denny. "I went home."

"Home?" his mother questioned. "What ever for?"

I think we all knew what the answer would be before his lips had time to frame it.

"To get somethin' to eat. I was hungry, and you made me wait an awful long time."

"What did you get?" inquired Dr. Sherman in a grimly calm voice.

"Just some bread and an egg I cooked right quick by myself, and some cold potatoes."

"And this," said the doctor drawing a paper bag from the boy's pocket. "How much of this have you had?"

"Not much," said Denny, growing sullen under the prevailing atmosphere of disapproval. "I didn't have much."

"And now," said the doctor, "you may go home and stay as long as you want to and eat all you want to. We can't do anything for you today."

"Why can't you?" Denny questioned. "My throat hurts awful sometimes. My nose hurts now. I can't breathe."

Patiently Dr. Sherman explained to him and to Mrs. Corrigan, who by this time was convinced that the operation which was not to be was the thing she most desired.

"But he was hungry," she insisted. "And me laying off a whole half day! Poor folks never gits their rights."

Then, with the dire threat that she would go to another doctor, she took her departure, and Denny, having rescued the candy bag from the desk, followed her.

"Teachers are dumb," grumbled Mary as we walked down the hospital hill. "This is one of the times when I vow I'll quit caring what happens to other people's children. Look at Mrs. Corrigan. She isn't really troubled at the thought of what is to happen to Denny. Why should we care?"

"Mrs. Corrigan doesn't understand the boy's difficulties well enough to do much for him," I said. "Somebody has to be concerned about what happens to boys like Denny. We have to help them if we can."

"Oh, do we?" scoffed Mary. "I'm tired of it. Most of our effort is wasted. But we don't often

have that fact brought home to us as plainly as it has been today. I'm afraid I'm done."

"Till next fall," I finished for her. "Then you will be the first to begin again on Denny and a dozen like him."

"That is probably what I'll do," she answered wearily. "Teachers are like that."

But Denny was not there when school opened in the fall. His absence the first day was not surprising. It was like him to start in a few days late. A week passed, and then we started a search for him. It was useless. The basement rooms that had sheltered him and his mother held other occupants now. Denny would trouble us no more.

It was some six weeks later that we met Ruth Wilcox, a fifth grade teacher in the Adams School over on the other side of town.

"We have a boy of yours at Adams this year," she began. "He came in two weeks late and—"

"Denny!" whispered Mary squeezing my arm.

"Who is he?" I asked. "Not Dennis Corrigan, I hope."

"The same," said Ruth. "And a problem child if there ever was one. Looking into those blue eyes one would think he might be a bright boy."

Mary and I laughed.

"We've said all that and more a hundred times," I said. "We know all about him and also about 'his pa that's dead.'"

"Is there anything we could do for him?" asked Ruth half hopefully.

"There might be something," I said. "He needs a tonsillectomy as a start on his ills."

"Do you suppose his mother would consent?"

We assured her we thought Mrs. Corrigan might be convinced of the need of such an operation.

"Of course she couldn't pay a cent," said Ruth. "I believe I'll try Dr. Sherman. He might take him on as charity."

"I would not ask him," Mary advised. "He has done so much charity work for the schools. Why not try Dr. Burke? He's young and wanting experience."

"That's what I'll do," agreed Ruth. "Something must be done for that boy!"

We walked on in silence for a few steps after Ruth had left us. Then, still repressing a desire to laugh, I looked into Mary's face.

There was a far-away look in her eyes. "Denny," she said musingly, "I see some teacher getting the better of you yet. Teachers are like that."

PALS

They played—
A boy and his dog—
One trudged, the other romped
Along an arbored road,
Dusty and wheeled into rugged ridges.

The lad whistled
As little boys do
In a tooting tune.
He laughed
When the dog leaped playfully
At an imaginary blow
Made with a boy's small fist.

And when, curiously,
The boy would stop to peek
Into a suspicious nest,
The dog, sniffing,
Expectantly wagged its close-cropped tail.

Pals
This boy and his dog
As they played
Along an arbored road,
Dusty and wheeled into rugged ridges.

—Ann Marie Fox.

Sex Education

III. The Anatomy and Physiology of the Reproductive System

BEFORE one may expect to teach the subject of reproduction to one's children, one should be thoroughly grounded in the elemental principles of anatomy and physiology by virtue of which the miracle of life begins. It is not at all necessary that the layman should know all the Latin names for every little part of the human body or that he should hope to understand the chemistry and physics of the whole process; but he does need to know something of the amazing things that take place in the months preceding the birth of a child, and he needs to understand the system well enough that he may give it the care that hygiene demands.

It is not proposed here to go into detail in the description of either the male or the female generative organs. There are any number of excellent sources of such information for those who really need it. Nearly every one is sufficiently familiar with the organs to understand in a general way the manner of their functioning; and that, after all, is all that the most learned man understands, for there is no one so foolish as to claim that he understands the whole of the process. The means by which two individuals may produce another like unto themselves are so extraordinary that even the greatest scientists must stand on the sidelines and marvel.

The generative system in either of the two sexes consists of two portions: (1) the sex glands themselves, which are the ovaries in the female and the testicles in the male, and (2) a system of tubes which carry the sex cells and which later, in the female, protect and nourish the developing child. Strange as it will seem to the layman, the organs of the two sexes are really much alike, each organ having its exact but poorly developed homolog in the opposite sex.

The sex glands of the male, the testicles, consist of a great number of microscopic tubules lined with cells which are constantly undergoing cell division after sexual maturity has been attained. These cells become the spermatozoa or sperm cells; they are tiny living bodies with long slender tails which whip about and in this way propel the sperm in its search for the egg cell. These sperm cells carry the entire inheritance which a child will or can get from his father. The spermatozoa may live for several days in the tubes of the male or may even live for some time after they have gained access to the female organs. They begin to be produced when the boy reaches puberty, that is, at about 14 years of age, and continue to be formed until senility has been reached. During the period of sexual maturity they are commonly produced at the rate of millions each day.

In addition to this function of the testicles, there is another which for good reasons is nearly or quite as important as the production of the sex cells. Between the tubules which produce the spermatozoa there lie certain cells which are called the interstitial cells. They secrete a substance which is absorbed by the blood and is responsible for the development of the secondary sex characteristics of the male. Every one is familiar with the fact that the body of the man differs from that of the woman in other respects than the appearance of the sex organs themselves. The beard of the male, the deeper voice, the heavier bones, the narrowness of the pelvis, the texture of the skin, the scantiness of the subcutaneous fat, and the lack of development of the breasts are all the results of this secretion. Unfortunate, indeed, is the man who does not have enough of this secretion to cause such a differentiation of his body that he may be immediately recognized as being definitely masculine in appearance. It is because of the loss of this hormone that the castrated male, known as a eunuch, loses the characteristics of a manly man.

The ovaries of the female serve a purpose in the female exactly comparable to that of the testicles in the male, although there are, of course, differences in the details. The egg cells are already pretty well formed in the ovary at the time of birth or shortly afterward. They need to be matured and stocked with a small supply of food; then they are ready to be extruded from the ovary. At the age of puberty, from 12 to 13 years, the girl begins to produce mature egg cells at the rate of one and occasionally more each menstrual month, or every twenty-eight days. This is continued until the menopause, the change of life, is reached. On the average, less than 500 egg cells are actually released in a lifetime.

By THURMAN B. RICE

As in the testicle, the ovary contains interstitial cells which produce a secretion that is responsible for the secondary sex characteristics of the female. The soft skin, the abundant subcutaneous fat, the development of the breasts, the higher pitched voice, the wider pelvis and a great many other typically feminine attributes are too familiar to need enumeration. Because of loss or atrophy of the ovaries or because of some other glandular disturbance, women occasionally lose much of their femininity and may develop a beard or coarse manlike features. Such a misfortune is distressing, indeed, to the individual herself and greatly disfigures her in the eyes of others.

The testicles and the ovaries are the essential organs of reproduction. Indeed, many of the simpler animals and plants have hardly any organs of reproduction other than these. Even in such highly developed animals as the fish and the frog, the eggs are simply turned out into the water, and the spermatic fluid is spread over them there. The accessory organs of reproduction in such cases are exceedingly simple, and sex, as one commonly thinks of it, can hardly be recognized. The episode that is considered by the thoughtless person to be the whole of the process becomes a trivial part of the program, merely the spreading of the milt of the male over the eggs laid in the water by the female.

As the higher forms of life are studied, it is noted that more and more care is given the fertilized egg. The reptiles and the birds lay large eggs containing considerable amounts of food so that the young may attain considerable size and development before they need to begin to fend for themselves. The mammals give their young even still better care, and for weeks and months the female carries the young in her own body; then after releasing them she suckles them for another rather long period. Obviously such an arrangement has necessitated an enormous increase in the complexity of the system. The entire body of the female is modified to take care of the fertilized egg and to nourish the young. The body of the male is likewise modified so that it may be able to impregnate the female and protect her and the young during the critical months before and after the birth of the young. Sex is highly developed in these animals.

The human species is characterized by the fact that the infant has an unusually long period of gestation, infancy and dependence. It is this long period of comparative helplessness that allows the child to develop countless possibilities which would have been quite out of the question had he been compelled to care for himself from the first. Likewise it is this which has made necessary the tremendous changes in body structure of the two sexes and the even more complicated development of the human

Before one may expect to teach the subject of reproduction to one's children, one must know the elemental principles of anatomy and physiology by virtue of which the miracle of life begins.

family life, on which the happy and efficient functioning of so much in the life of the child depends. This is a most vital point which is often overlooked by superficial students of sex and its problems. They seem to think that the work of the reproductive organs is finished as soon as the child is born or weaned. Actually this is by no means the case. The child needs a highly stable and secure home until he or she is at least grown. Indeed, even after he has reached middle life, he will still feel the need of the contact with those dear parents who have been so unselfish in their devotion for their children.

Anything, then, that tends to hold the father and mother together in a tight and rugged union until the child is raised is of tremendous advantage to the to the individual and the race. This is also a function of the reproductive organs.

The accessory sex organs of the male consist of (1) a long tortuous tube from each of the testicles to the corresponding seminal vesicles, where the spermatic fluid and the sperm cells are stored until such time as there may be opportunity for extrusion, or ejaculation; (2) the prostate gland, which secretes a mucus-like fluid which carries the seminal secretion and makes a medium that permits the spermatozoa to live and reach their objective, and (3) the penis, which is an erectile tube capable of depositing the mixture of spermatic and prostatic secretion into the vault of the vagina near the mouth of the womb.

The accessory organs of the female are necessarily much more complicated, for they must not only protect the egg cells but provide a home for the developing child for nine long and eventful months. Essentially they consist of two tubes, the fallopian tubes or oviducts, which are open at the upper end and receive

the egg cells when they are extruded from the ovaries. These tubes open into the womb, which is a muscular, hollow organ capable of enormous expansion. The womb in turn empties into the vagina, which is for the purpose of receiving the seminal secretion and later of serving as a passageway for the child at the time of birth. The breasts nourish the newborn child until he is old enough to eat other food.

The egg cell, after being released by the ovary, passes into the fallopian tube, where it may or may not be fertilized by coming into contact with sperm cells. In case it does not make such a contact, it lies there for a few days and then passes down into the womb and finally to the exterior. If it is fertilized, it begins at once to divide rapidly and grows apace, utilizing the food that is stored in the egg cell and probably also some food absorbed from the surrounding tissues. It now migrates down into the womb and attaches itself to the uterus, the inner wall of the womb, as would a parasite. After a time a placenta is formed. This organ is the point of contact between the mother and the child. The bloods of the two individuals remain separate, both the mother and the child having a set of closed vessels in the placenta; but fluids and gases can freely pass from the one to the other through the vessel walls by the process of osmosis. The mother furnishes food, water, oxygen and other requirements; the child gives off waste materials of various sorts to the mother. No nerves pass from the one to the other. Various membranes for the protection of the child are also produced. These membranes and the placenta are delivered after the child is born and are collectively known as the afterbirth. At birth the walls of the womb contract strongly and expel the child.

The life of a new individual begins when the living egg cell of the mother is fertilized by the living sperm cell of the father. Really, then, the human child is approximately 9 months old when he is born; more has happened in the development of that individual during that nine months than will take place in the next nine years. There are many who suppose that life begins in the child at about the time that the mother may feel the movements of the child in the womb. Indeed, it is customary to refer to these movements as the "beginning of life." This phenomenon is usually observed at about the middle of the pregnancy, Actually, however, the child is alive from the time of the union of the egg and the sperm.

As soon as it is known that a baby is expected, parents are usually greatly interested in the speculation as to whether the child will be a boy or a girl. There is good reason to believe that the sex of the child is unalterably determined at the time of fertilization. To date there is no reliable means of controlling the sex of the offspring, and there is no positive way of ascertaining, before birth, the sex of the child. According to the most widely accepted theory of sex determination, each cell in the body of the female contains two determiners for sex, known as chromosomes, while each cell in the body of the male has but one such determiner. When the egg cells are produced, each cell contains one of these determiners; when the sperm cells are made, half of them have one sex determiner and the other half have none. If, then, the sperm with one sex chromosome meets an egg cell, which always contains one, the fertilized egg cell will have two and is therefore female. If the sperm cell has no sex chromosome, then the fertilized egg cell will have but one, the one from the egg cell, and the sex is then male. If this theory is correct, and there is little doubt that it is correct, it would seem that the control of the sex of the unborn child by any practical means is probably quite outside the range of possibility. Many attempts to control sex have been tried, but none has as yet succeeded.

Even though the sex of the child is determined from the first, it will be weeks before the differentiation of the organs is such that the sex might be recognized even if the child could be examined closely. By careful examination of a stillborn infant it is possible during the third month of fetal life to determine whether or not the child would have been male or female. Previous to this time the sex organs appear exactly alike, and even in adult life it is possible to find in each sex the exact homolog of the organs of the opposite sex. In the early months of fetal life the one or the other set of

characteristics begins to be accentuated, and the opposing organs begin to atrophy.

In case a developmental error is made on the part of nature, it may be rather difficult to say without careful examination—an examination which sometimes requires an abdominal operation—whether the full grown individual is male or female. These unfortunate persons are called hermaphrodites. Usually they are decidedly more like the one sex or the other, although there are some who present considerable difficulty in diagnosis. These individuals are practically always sterile, either as males or as females, and never are they actually able to function as father and mother at the same time or at different times.

Obviously the matter of reproduction is of the utmost consequence both to society and to the individuals concerned; for that reason it is extremely important that every person of mature age should understand something of the complex phenomena which take place during the months of pregnancy, the hours of actual confinement, the days of the lying-in period and the months of lactation. It is, furthermore, most essential that this information shall be highly authoritative. If these relations were well understood, a vast amount of suffering, distress and danger to the mother and child might be avoided. The matters have been well covered in at least a dozen books and as many pamphlets.

So far, even the most prudish individual could hardly find fault. The race must go on, and there is no other way by which it may do so. It is simply a matter of doing it this way or of staying out of the stream of life that has flowed without a break since the day of creation. In this way the race continues.

However, the human reproductive system (using the term system in a much broader sense than merely a part of the human body) is far more complicated than the reproductive system of the higher animals. It includes everything that centers about the family, the home, the period of courtship and the marriage relation. Matters pertaining to customs, laws and the ownership of property belong here. Facilities for education of children, activities of the church, government, industry and society are closely related to the matter of raising a family and are for that reason closely related to the reproductive function. One would not wish to be a parent unless one were reasonably well assured that one's children might have the protection of the government and the advantages of schools and churches. Is it not a fact that all institutions really exist for the sake of the child, and that the child, in a somewhat different sense, exists for them? This is the reason why people must broaden their conception of sex.

Undoubtedly the home is the most important of all the institutions, and the family is the real unit of society. In such a case anything that makes the home and the family a stable organization is of the utmost importance. This is why sex as a means of embrace and a medium for the expression of tender affection and love between husband and wife is so vital. There are those shallow thinkers who insist that there is but one legitimate purpose of sex—actual reproduction. They point out that other animals do not have any other objective and that therefore man should have none. But neither do the animals manifest patriotism, altruism and love, as we know them, or any of the higher traits of character which are manifest in the human race. Then, by the same token, man should not have them either. These persons would have one believe that man separates himself from the beasts by being like them. But these misguided individuals count only a little in the present generation and for the most part it is safe to assume that they will count not at all in the next.

There are three proper functions of the reproductive system in man: (1) the production and the bringing together of the sex cells; (2) the production of the child and his protection before, during and after birth, and (3) a means whereby a man and wife may express affection for each other and on that solid foundation build a home which is, in turn, the foundation of society. All these functions are absolutely legitimate, proper and respectable when they are exercised according to the laws and customs of the domain.

It will be noted that I have not tried in this discussion to separate the function of the one sex from that of the other or to describe the two systems as if they were separate entities. Without the other, either sexual system is meaningless; each is the supplement of the other. Sex is a unit; it cannot be subdivided. It is for this reason that I believe that books and articles written expressly for the one sex or the other for the purposes of instruction in these matters are ridiculous. I do not even believe in separating various age groups as presenting problems peculiar to that group, though it is sometimes necessary to make rather arbitrary divisions for purposes of publication or pedagogy.

I wish to emphasize particularly the point that sex is a far broader phenomenon than it is usually considered. The man who works hard to support his growing flock, and the mother who sacrifices and plans for her brood are practicing the reproductive act in the broad sense. It is impossible to say that the impulse that drives a parent into the path of a train to rescue a child is less a sexual impulse than the act which immediately preceded the conception of that child.

[NOTE.—In the October issue, Dr. Rice will discuss "The Teaching of Sex to the Young Child."]

Why a Nursery School?

By *Elizabeth Gray Miller*

"I WATERED the plant. It was thirsty." "David and I are going to fix the flowers together. We are happy, aren't we, David? We are working hard."

This conversation between two children took place recently in a nursery school. Just what is a nursery school and why should one send a child there? Does it take the place of a home?

A nursery school is "a regular coming together of children of nursery age—18 months to 4 years—in an environment which has been scientifically arranged and continues to be scientifically rearranged so that it will meet the changing needs of every child in it and where the child, even at nursery age, not only can, but does, live to his full capacity."

According to a recent report of the National Education Association, "Psychological investigations show that the first six years of a child's life are of great importance for educational purposes." This is the time when habits are formed and character is developing. In these years the child discovers both the world and himself. He learns to put into action his motor forces and to tackle and solve practical problems which come up in the daily experiences of his life.

Dr. Mandel Sherman, director of the Washington Child Research Center, Washington, D. C., said in a recent article, "One of the best ways of teaching a child the reality of the world and the habit of facing and solving his conflicts is to permit him to have as many experiences as possible outside his home early in life."

Some persons think that all children do at nursery school is play. This is not entirely true, but it is through the medium of play that children at this early age learn. It is by building with blocks, by climbing, sliding, balancing and such muscular activities as a child may enjoy at nursery school that he learns initiative, self confidence and muscular coordination as well as a regard for the rights of others of his own age.

In the daily routine of school, habits of neatness, independence and regularity are also developed. Many children come to school unable to take off or put on their own wraps. At home they are often deprived of the privilege and pleasure of doing things for themselves because it is quicker and more convenient for the mother or nursemaid to do them. They have not had the thrill of zipping a legging or putting on a coat without the assistance of some adult. Instead of building up a feeling of self

confidence and personal responsibility, they are developing a fear to attack what they may be able to do.

For instance, a child spills water in nursery school. There is no nursemaid to wipe it up for him. Instead, he is shown how to wipe up the water himself and to carry it so that he will not spill it again. Thus he is using his power to control his mistake instead of fearing to make one.

At nursery school each child has his own low hooks marked with a particular symbol which he has chosen himself; this symbol may be a flower, a fruit or an animal. He goes unasked and unassisted to the toilet and washes his hands afterward, carefully putting away his own soap and towel. Some children come to nursery school already well versed in such matters, but others need the training which the nursery school can give and has the time to give to the individual child.

The nursery school, moreover, is as important to the parents as it is to the children. Parents have the opportunity of seeing the problems of their own children in relation to the problems of other children of the same age. Daily records are kept of the various activities of the children as well as of their progress in social, physical and mental development. By these records the parents are kept in close touch with the school and the activities of their children and may receive at all times the advice and guidance of persons trained in child study.

The nursery school does not take the place of the home, but it does supplement it in a necessary way.

What Your Child Eats at Noon

What child would not be tempted by such a carefully planned, attractive luncheon?

By Mary C. Brown

SCHOOL children prefer foods which are colorful. Ham sandwiches were a general favorite in one cafeteria until the lettuce sandwiches were wrapped in lovely green waxed paper; then they sold better. There were few customers for cornstarch pudding served in white saucers; but the first day it was put in green sherbet cups, the girls behind the counter could scarcely serve it fast enough. On St. Patrick's day, when a tiny shamrock was stuck into the cap of each bottle of milk, the entire supply was sold out long before the lunch hour ended. The demand for milk was heavy when it was served in amber glasses instead of in plain tumblers.

The fact that red gelatin is a best seller in cafeterias for adults as well as in schools is interesting in the light of some experiments with 102 children between the ages of 18 months and 3½ years. Red was chosen in 52 per cent of the cases, green in 25 per cent and neutral in 23 per cent, when the same apple jelly was presented for choice. These children were 2 to 1 in preferring food neatly arranged in discreet mounds instead of being stirred together on the plate.

Wise cafeteria directors serve food which is healthful, properly prepared and attractively served. In many schools there is supervision of the lunchroom, which assures mothers that children will be adequately nourished. Attendance at the lunchroom is checked the same as at classes, and in many schools, washing of hands immediately before entering the lunchroom is required.

Some home economics classes, after studying the balancing of meals, have made a special project of scoring the filled trays. Pupil cooperation is assured, and some lively competition is secured by the totaling of scores in different classes; a prize is often awarded the room having the highest score. A talk by the football coach, stressing the necessity of right food for health, may stimulate the boys. A talk about glossy shiny hair, clear smooth complexions, bright eyes and natural color in the cheeks may impel the girls to build health in order to achieve beauty.

In schools where the lunch hour is entirely unsupervised, it is often found that ice cream and candy bars comprise the meal or that the

money is taken to the corner store for hot dogs and pop. While a child naturally chooses energy food, he must be "sold" on the idea of foods containing minerals, vitamins and cellulose.

The food eaten by the child who comes home to lunch can be closely watched, provided mother is able to keep him at the table long enough before he dashes out to play ball.

In any case, the food must be colorful, attractive and tasty; it must also meet health requirements. If the food is not eaten, it does not matter how careful its preparation has been.

A special problem is that of packing lunches. The same old food in the same old way dulls the appetite. There must be an element of surprise. This is one reason for mother to pack the lunch herself; children are usually not hungry or not much interested, and they are likely to pack an inadequate amount in a hasty manner. On the other hand, foods which are really liked may be served over and over again. A well made chicken sandwich is perennially welcome.

Years of careful training presumably influence the child to choose and consume a well balanced meal. He may see that his lunch always includes a hot food or beverage, a fruit or vegetable, and a meat or meat substitute, usually as sandwich filling. However, the young citizen away from parental roof and watchful eyes may toss his lunch into the waste basket, buy a hamburger and run out to play. Hence it is up to mothers to pack lunch boxes which are so intriguing that they will be investigated and their contents devoured with avidity!

The lunch is first smelled, especially after it has been shut up in a warm coatroom for three hours. It is important to wash the box with soap-suds, scald it and leave it open to air during the night. Any food that is questionable as to freshness must not be packed. Custard with an "off" flavor may sour completely. Salad dressing which has been kept several days or is not stored at proper temperature may ferment. The most dangerous spoilage may occur in nitrogenous foods such as meats (especially ground meat and liver), beans and peas.

Unless a child particularly likes fish or onions, they should not be packed into the lunch, as the odor permeates other foods; if they are included, they should be tightly wrapped in parchment paper which does not allow any moisture or odor to escape.

After one general whiff of the contents, which either repulses or entices, general appearance is instantly noted. Neatness as well as preservation of food moisture, cleanliness and flavor is achieved by wrapping each food separately.

At mealtime one likes bright, sprightly, gay colors. Those which belong to the food itself are best. Blue is a color seldom found in food; yet it is a complement to orange and brings it out in golden contrast. A blue enameled-ware cup is ideal for yellow custard.

I have been serving cottage cheese for lunch in a green opaque glass refrigerator dish, and I find that it does not need any other garnish except a dash of paprika. One does not need a course in art to get nice color contrasts; one needs only to observe the effects one produces with foods.

Flavor is tremendously important. The natural food flavor must be conserved by careful cooking and brought out by the discreet use of onion juice, lemon juice and other flavors in their place. Stewed fruits, ordinarily considered by students too tasteless to buy, went

A little time and thought devoted to the packing of the school lunch will pay big dividends in esthetic as well as in appetite appeal.

Menus for School Lunches

Sandwiches		Meat or Other Protein	Thermos Bottle	Vegetable	Fruit	Sweets
Bread	Filling					
White sandwich loaf bread	Chopped celery; salad dressing	Hard cooked egg	Milk	Lettuce	Apple	Cup cake
Oatmeal bread	Cold sliced roast beef		Cream of potato soup	Cabbage salad	Sliced pineapple	Sugar cookies
Boston brown bread	Jam	Baked beans	Buttermilk	Carrot salad	Orange	Dates
Graham bread	Cheese		Tomato juice	Canned asparagus tips	Baked apple	Cinnamon buns
Corn bread	Crisp bacon and parsley		Malted milk, hot or cold	Celery	Canned peaches	Cup custard
Hard crusty rolls	Chopped olives; lemon; salad dressing	Tuna fish salad	Hot postum made with milk	Celery and lettuce in salad	Stewed dried apricots	Oatmeal cookies
Muffins	Scrambled eggs and crumbled crisp bacon		Hot cocoa	Sauerkraut	Ripe tomato or whole canned tomato	Rice pudding
Rye bread	Sliced meat loaf		Vegetable chowder		Grape-fruit	Graham crackers
Parker-house rolls	Mayon-naise	Chicken white meat	Hot spiced grape juice or cold grape juice	Tiny canned peas	Raisins	Sweet rolls or coffee cake
Nut bread and butter			Cream of corn or cream of celery soup		Figs	Marsh-mallows
Raisin bread	Philadelphia cream cheese		Sauerkraut juice	Canned Lima beans	Banana	Sponge cake

like the proverbial hot cakes when they were served in green glass cups. The fruit itself may be colored. Canned pears may be made a tempting green with harmless fruit coloring, and any fruit which is an insipid lavender or pink can be changed to a glowing rosy red. Do not be too lavish with the use of artificial color.

Sandwiches form the bulk of the meal, the bread supplying mainly the carbohydrate. The filling should be liberally spread for good flavor; furthermore, it may furnish a quantity of protein. A fresh green leafy vegetable or other succulent food is also to be considered. The bakery furnishes many different kinds of bread. Home-made buns, biscuits and breads are also welcomed. Bread should be a day old in order to cut satisfactorily. For quicker drying, it may be placed in a warm dry place, as on a shelf above a radiator, so that it can be cut without being torn or crushed. The knife must be sharp; a back and forth motion is used instead of forcing it down through the bread.

Before a slice is cut, it may be buttered, for the loaf will stand more pressure than a single slice. The butter is warmed to a temperature from about 70 to 80 F. and creamed with a wooden spoon or silver knife to spread easily. Every slice is buttered, for butter prevents the absorption of moist filling by the bread. Thin, tender, crisp, thoroughly baked crusts are usually enjoyed if they are well buttered and covered with sandwich filling. If they are dry and will not be eaten anyway, they may be cut off after the sandwich is made.

Bread is cut from three-eighths to one-fourth inch in thickness, as desired. The filling must be of a consistency to spread thickly. If it is too thin, it will run out at the sides. If it is too thick, it may be thinned with cream, lemon juice or salad dressing. It must contain sufficient moisture to make the bread palatable. A dry slice of roast beef may be moistened with salad dressing, and a crisp leaf of lettuce may be placed next to the meat. Lettuce must be thoroughly dried and actually crisp.

Sandwiches with the same kind of filling are wrapped in pairs. Three or four kinds may appear in the same lunch, if the fillings are valuable and if there is a sufficient variety of food in the meal. Active, growing bodies need a good deal of carbohydrate, as found in bread and cereals; for it furnishes heat and energy.

One sandwich or a neat stack of sandwiches is placed on a piece of paper, the proper size is estimated, and the paper is cut. To make a neat package, the paper should not be too long and should be wide enough so that both edges may be brought up together above the center of the sandwich. Holding the edges tightly together, fold them down on one side, about a half inch, and crease the fold the entire length of the paper. Now bring the paper snugly against the sandwich, so that it will fit smoothly without extra wrinkles; holding this folded edge up, make another crease right at the sandwich on one side of the paper. Press the folded edge down flat against the sandwich, covering the side which was creased and leaving on top the side which was not creased the last time. The result is that one folded edge shows along the entire length of the sandwich, but the paper is folded in such a way that it holds itself together without string or stickers. The ends are loose and need to be folded.

Press the lengthwise fold which you have just made against the end of the sandwich, closely,

from the top of the sandwich down to the piece of the paper that extends from the bottom of the sandwich. Now bring the lower right corner of the end-piece over onto the upper left corner, forming a triangle. Fold the triangle over the end of the sandwich, so that the diagonal creased fold exactly runs from the top of the sandwich to the bottom of the sandwich. Repeat this on the other side. If the paper has been cut the right length, this will produce two triangular shaped folded pieces of paper which are turned up toward the top of the sandwich and fastened flat with a gummed seal, a piece of gummed tape, or a rubber band slipped over the entire sandwich. Wrapped in this way, a sandwich has no extra crumples and folds; it is neat and requires less space when it is placed in the lunch box.

In one of the illustrations are shown sheets of fancy waxed paper, expressly designed for sandwich wrapping. The sheets measure 11 by 13 inches. They have been laid on top of sheets of parchment paper folded into sixths, but one can see the thinness of the top sheet of waxed paper, where the edge lies over the kitchen table; the airplanes are bright blue with bright yellow propellers. On the sheet just below are yellow daisies with brown centers. Below is a futuristic design in blue and yellow, reminding one of airplanes; the same design is at the bottom in red and black, with a red and orange forget-me-not paper between the two. Surely there is enough color here to wrap anything from celery to nuts! This is heavy enough so that it will not stick to the butter and will not tear.

The cellophane-wrapped set of paper plates and paper cups with handles has Mother Goose decorations. For the older children, the handled cups are available in paper, copied from Dresden china, with the original lovely colors. A cup of mint gelatin is shown as well as cups in larger sizes, suitable for carrying liquids or moist foods, and having attractive fruit basket designs in pastel colors. These are made in eight sizes with capacity from 2½ ounces to a full pint; there are lids for all sizes.

Rolls of gummed tape can be bought in red, orange, green and brown. Cellulose tape does not require any moistening and is transparent. A sheet of tinfoil purchased at the stationery store was cut and used to wrap some dates; it is purple on one side, silvery and crinkly on the other.

The raisins are shown wrapped in cellophane, brought up and twisted at the top. To make it easily eaten by the child who is anxious to play, the orange has a half-inch belt marked around the center with the point of a knife. This is peeled off in one strip. Then each end-piece is taken off whole. The sections of the orange are separated from each other at the center but are left so that they hold together in one long strip at the outside, which is rolled up again; the pieces of peel are then put into place, and the whole is held together by being wrapped in cellophane.

In the other picture the same lunch box, which may be neatly carried like a suitcase, has been opened, and the milk has been poured into the cap of the half-pint thermos bottle. A small can of fruit is ready to be opened with the can opener shown, which a boy may carry on his key ring; it is also easy for a little girl to use. The fruit, sealed at the canning factory, is safe, regardless of coatroom temperature, and it makes a large serving. A paper fork is shown beside the paper plate. The sandwiches have been wrapped and sealed with a fancy gummed sticker. Silhouette seals, floral seals with poppies, tulips or roses are also available, and stickers which are clever for sealing birthday packages can be purchased.

A recipe follows for an easily made, inexpensive sauce which may be used as a basis for a number of different fillings: In a heavy saucepan, melt 5 tablespoonfuls of shortening. Add 5 tablespoonfuls of flour, stirring the mixture to a smooth paste. Gradually add 1½ cupfuls of hot milk, stirring the mixture constantly and cooking it until it is thick and bubbling. Add ½ teaspoonful of salt. Remove the sauce from the fire and add 1 teaspoonful of butter. Beat it with a rotary beater if desired.

The mixture may be divided into three parts, each ½ cupful. To one part, add ½ teaspoonful of paste mustard and 2 tablespoonfuls of lemon juice, making a quick salad dressing to which may be added chopped nuts, olives and chopped meat. To another part, add ½ cupful of grated cheese while the sauce is slightly warm, stir until the cheese is dissolved and well mixed. To the third part, add ½ cupful of peanut butter and stir well while it is warm.

Following Education Around the Globe

The Sun Is Always Shining on Some Classroom

Diligent students in an Arab school in Morocco

William Thompson

A "district school bus" enroute to a classroom in the province of Quebec, Canada

J. Jay Hirz

A knitting school in a field of flowers on the Isle of Walcheren, Zeeland

William Thompson

Perhaps the only outdoor forest school in the world, near Zurich, Switzerland

J. Jay Hirz

A village class in India held outdoors

William Thompson

An embroidery class in the South Manchuria Railway's' Girls' School at Mukden

William Thompson

Individual Differences in a Sight-Saving Class

By MARGUERITE KASTRUP

THE growth in the number of sight-saving classes has been steady throughout the United States since their establishment in 1913, and there are now about 400 such classes. It is estimated that 47,000 pupils in the entire school population are suffering from defective vision. This means that approximately 5,000 more sight-saving classes are needed to provide educational advantages for these children with impaired vision. Colleges are offering courses in the training of sight-saving teachers. Classes that have been well established under competent supervision have given most gratifying results.

The enrolment in a sight-saving class is necessarily small because of the number of grades to be accommodated and the individual educational problems arising from various eye conditions. At times, four or more grades may be represented in one room. In addition to the regular teaching, the instructor has the responsibility of daily remembering that each child is suffering from some eye condition that needs special consideration. These children naturally group themselves in the following categories: those having insufficient vision to enable them to read ordinary print or to see work on the blackboard; those who may be able to read ordinary type but at the expense of their vision; those with progressive eye troubles, and lastly those children with eye diseases which seriously affect vision. The studies of the cases recorded in this article were conducted by a sight-saving teacher over a period of two years.

A MOTHER, leading a girl by the hand, drifted into the sight-saving class one day and announced that she had come to visit before entering her child. The girl presented a most unattractive appearance because of a facial disfigurement caused by a partial paralysis. In addition to hyperopia, she had a decided squint in one eye. She walked awkwardly about the room, apparently not knowing where to place her feet. The mother pitifully told of the child's attending an overcrowded church school. There a too sympathetic teacher had led the child about the building by the hand. Considering her eye condition incurable, the girl had been allowed to sit year after year absorbing what little she could from other children's recitations but never once taking part in any school activity. She had an abnormal fear of people, especially of doctors and persons in authority. Traffic and loud noises terrified her. She was known to shriek when a gong sounded in the school corridor. She had never gone to the neighboring store or crossed the street alone because of her mother's undue precaution. In all her life she had never felt the thrill of achievement. She had not been asked to do anything; naturally she felt an inferiority complex. An indulgent mother had bathed and dressed her every day until she was as helpless as an infant in some respects. This is the prelude to the child's entrance to the sight-saving class.

Although she still was brought to school and taken home by members of the family, it was an entirely new experience for her to be separated from her mother for the entire day. She was delighted with each day's activities. She especially enjoyed the music lessons given by the special sight-saving music teacher because she is passionately fond of music. To be allowed to go on an errand was her greatest thrill. At the end of the first week her mother reported that the child had slept throughout the night; this was something she had never done before.

She had never played with children. On the playground she either stood alone in a corner or chased younger children. It was no wonder that the little ones thought that she was queer and refrained from asking her to participate in their games.

Then one day she failed to appear. Her mother telephoned to say that the child was afraid to work her arithmetic at the board. This was most peculiar, as all sight-saving pupils do a great deal of their work at the board. The mother brought the child in the afternoon,

The fear of people sent her scurrying behind furniture at the first indication of a stranger's approach.

but no reason could be found for her fear. Then quite unexpectedly during lunch the next day, a girl remarked about the fun they had had in scaring the new girl. She had been told that the teacher had only to press a button, and one would fall into the basement where one would be cut into pieces. The fear was easily explained now. Everything was clear to the teacher. She knew just what had happened. The child had been standing over a small trapdoor used for plumbing purposes, and each time the teacher snapped on or off the lights the child expected to be hurled into darkness. After much persuasion she was convinced that there was nothing to fear. Today she laughs at such tales, for she has learned not to believe improbable stories.

She grew rapidly during that year. The new glasses were correcting the squint. With an intelligence quotient of 84 and with years of unpreparedness, it was not surprising, however, that she was unable to complete the year's work satisfactorily. Handwork and gymnastic exercises are most difficult for her, as she still lacks motor control. After much persuasion her mother is allowing her to walk home from school with her neighbor's children. She is pathetically delighted over her accomplishments. A special sight-saving music teacher is giving her private piano lessons. She is choosing her own library books and helping in the home. Most important of all, she is supremely happy, and her Friday night good-by is almost always followed with, "I wish there was school tomorrow."

THE FIRST day of school in September a mother and little boy entered the sight-saving class.

"He was a bad boy in the other school. He didn't work, and he couldn't pass. The nurse said he needed glasses, so we got them," the mother said.

The little first grader balanced himself first on one foot and then on the other. He peered through his thick lenses at the teacher; then immediately he picked up the nearest object on the desk.

"Put that down! The other teacher said he was always looking at things on her desk."

The mother left, and the child toured the room. He examined any object he chose. Glancing up at the clock, he exclaimed, "Oh, the clock has hands! I can see them."

A new world was unfolding to him; he was seeing things for the first time rather than feeling them.

The first concern was his health. He was receiving some comfort from his well fitted glasses; however, a semester of constant eye-strain in the regular classroom had developed a serious case of nervousness. His medical record also showed malnutrition and a heart condition requiring proper attention. Remedial work was begun immediately. He was examined regularly by the school physician. Milk was given him in school, and a diet was prescribed to be followed at home. A cot was placed in a quiet corner of the sight-saving room where he might rest at regular intervals. On pleasant days he spent the time between classes out in the sunshine. He became delighted with the clear type primer, for he had found a book with type of a readable size. His progress was rapid, and before the end of the first year he had exhausted the supply of first grade reading material.

He announced to the class one day that he could play the piano. From the day he stood at the piano, for he was too small to reach the pedals in a sitting position, and played one selection after another, he became the pride of that class. He now accompanies the children in their group singing and has been chosen pianist for the sight-saving council. Because of his eye condition, the oculist has forbidden piano lessons with notes; however, the sight-saving music

The other children had frightened the new girl by inventing stories of a trapdoor.

teacher is giving him ear training and fingering exercises. His last medical report showed a gain in weight and a decided improvement in the heart condition. He is not the troublesome boy of last year. He does not need to handle objects in order to know them; he sees them.

A WORKER of the Humane Society called at the sight-saving classroom one morning to obtain a report of a little Polish girl under her supervision. This child had been found in most tragic surroundings. The fear of people sent her scurrying behind furniture at the sound of a stranger's approach. The court, after breaking up the home, placed the child in a boarding home.

A mental test revealed an intelligence quotient of 62. Her physical examination showed a myopic condition of the eyes, enlarged tonsils and a predisposition toward tuberculosis. Although her intelligence quotient was too low for admittance to a sight-saving class, she was, nevertheless, given a trial. Her craving for affection was satisfied by an indulgent boarding mother. In fact the child was so intoxicated with this new-found love that she became quite a wilful and naughty child. She demanded attention from every one. The mother was willing to cooperate with the school, and the difficulty was soon righted. The child insists on referring to the boarding mother as her own mother. She has gained in weight and has a much better color since her tonsil and adenoid operation. Her school work has improved; her mental test now reveals an intelligence quotient of 90. Her fear of people has entirely vanished under her new environment.

A FIRST grade teacher called on the mother of a little boy in her class to inform her that the child was feebleminded and would never learn to read. The broken-hearted mother asked to be allowed to help him at home. The teacher sent a primer home, and the mother began to work with him every evening. Then one night the child burst into tears and exclaimed, "I can't see the words in the book." It became clear to the mother that this was true, and she notified the school nurse. The child was fitted with glasses at the school eye clinic. He was given the Binet intelligence tests, and it was found that he was perfectly normal. He was placed in a sight-saving class immediately, and a transformation took place. He has advanced regularly with his class and has proved to the world that he is not feebleminded. Reading was no difficulty when he used clear type books.

A YEAR ago a boy with the following record entered a sight-saving class: He had gone to school in a small southern town. One day he asked the teacher if he might have a front seat. She promptly told him she had enough blind children in her room already and sent him to his seat. Being sensitive, he did not want to return to school. The fact that he could not see the work distressed him so much that he became ill, and it was many weeks before the family discovered the cause. He was fitted with glasses and placed in a private school maintained by a Negro minister's wife for her children and a select group of others. Then the grandmother, with whom the boy was living, died, and he was sent north to live with his widowed mother, who was a public school teacher, and his six brothers and sisters. Shortly after his arrival in the North, the school nurse discovered that he was wearing incorrectly fitted glasses. He was taken to the school eye clinic for refraction. Attendance in the sight-saving class was advised, and with properly fitted glasses he was placed in the class. He was able to work in several groups in the room; in that way he was aided in making up work, so that he was granted a double promotion at the end of the first year. He has been unfortunate this year in having to miss a great many days of school because of asthma and a serious catarrhal condition of the ears. However, he will be able to keep with his class.

THESE are but a few of the cases observed in sight-saving classes. One can readily see that an individual type of instruction is necessary; in addition, the teacher must take these children of varying ages and individual differences and unite them into a socially conscious group, able to face the world with educational advantages equal to those of normally sighted persons.

National Safety Council

On country roads, children should keep to the left, facing on-coming traffic.

CAN SCHOOL DAYS BE SAFE DAYS?

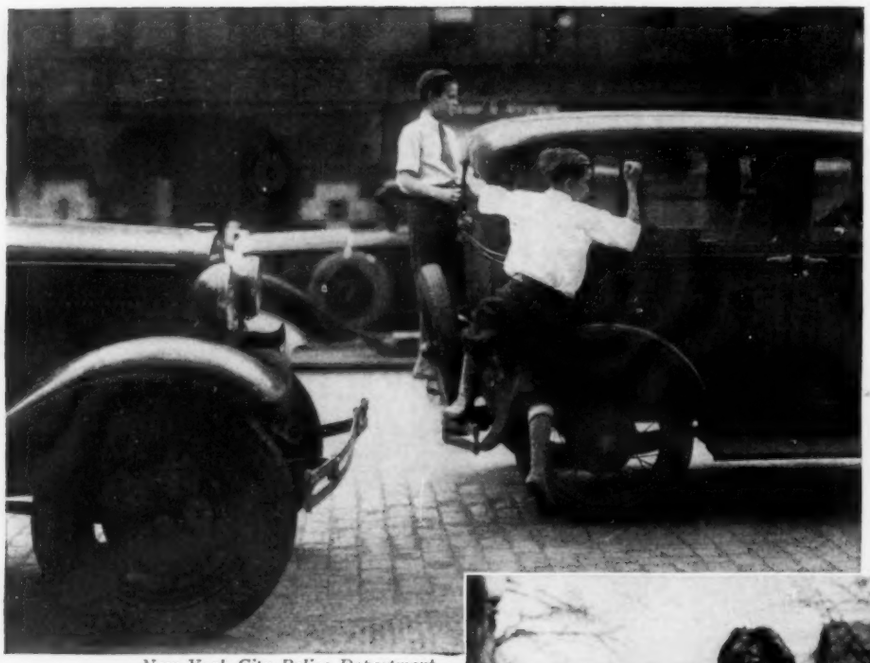
By Curtis Billings

THE CHILDREN of America are returning to school this month. Twenty-five million strong, they will make their way to one-room shanties in the back country, to modern consolidated schools in progressive farm communities and villages, and to great brick edifices in the cities. Most of them will walk to school; some of them will ride; a few of the older children will drive.

While this tremendous procession is one of the proudest boasts of the nation, there are aspects of it that should cause the deepest concern. Before the first day of October, no fewer than 53,000 children will have been injured more or less seriously in accidents. By June the number hurt will have reached the staggering total of half a million. Seven thousand will have died of their injuries.

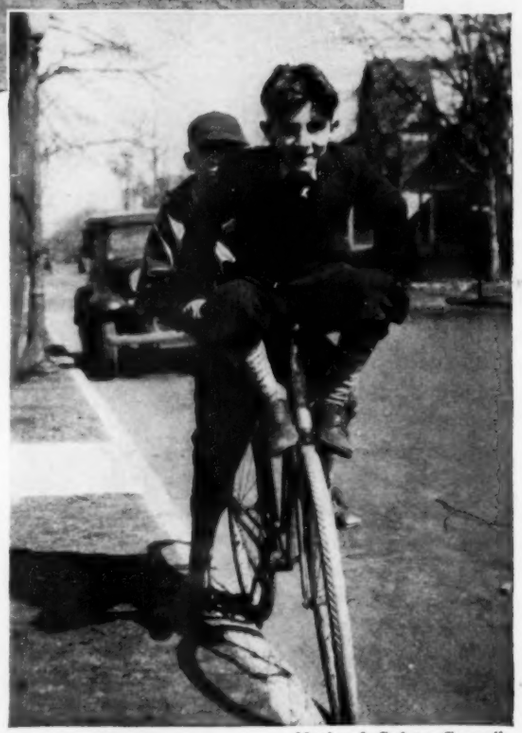
These doleful predictions are not guesses; they are based on careful computations prepared by experienced statisticians who had before them as they worked the records of fatal and nonfatal accidents to children of school age in many past Septembers and many past years. It is small wonder that morning after morning the American mother hustles her children off to school with a pang of fear.

Since almost 50 per cent of the 7,000 untimely deaths will be caused by one type of mishap alone, namely, the automobile accident, wise parents will do everything possible to safeguard their children from the dangers which



New York City Police Department

Dangerous practices, such as stealing a ride on the back of a vehicle or riding on the handle-bars of a bicycle, bring death or injury to thousands of school children.



National Safety Council

are ever lurking on our streets and highways. Some specific things they can and must do if their children are to be safe: First, parents can teach their children how to walk safely to school; second, they can help provide them with safe transportation, and, third, they can instruct them in safe driving.

The lessons children must learn if they are to walk safely are simple to teach, but too many parents fail to realize that teaching by example is a more effective method than teaching by precept. Thus the parent admonishes his child: "Never cross a street except at a crossing," or "Look both ways before attempting to cross"; but the youngster observes that his father and mother do not practice what they preach. The example they set, being the more impelling method of teaching, is what the child will follow. In other words, the child is far more apt to do what his parents do than what they caution him to do. Parents must perceive fully that when they undertake to teach a child to walk safely, they must use both methods if they are to succeed. Not only precept but also example must be employed if the child is to acquire those obviously desirable habits which are so fundamental to safety in a world of high-powered motor vehicles.

Country children should be taught to walk on the left side of the road rather than on the right. When they do, they face oncoming traffic and are constantly looking ahead to see what is coming. This is far safer than walking on the right side with cars coming up from the rear. Only occasionally does the walker turn to see what is coming, and sometimes he turns too late! The pedestrian on the right side is utterly at the mercy of the practically noiseless automobile driven by a motorist who is blinded by the sun, by one who is intoxicated or by one who for any one of numerous reasons is not in control of his machine.

A group of children should walk in single file or, at most, two abreast on the extreme edge of the road. Surely the most dangerous way for them to walk is in a loose group scattered from edge to edge of the road. Even the most alert and sane driver is capable of a fatal error when, after rounding a curve or climbing a hill, he finds himself suddenly bearing down on such a crowd.

Among the vital lessons for city children to learn are the following: Cross streets at crossings only. Cross with the green, or "go," signal. Cross when a policeman beckons. Look all ways before crossing.

Country and city children have several problems in common. Playing in the street and playing on a paved state trunk highway are both extremely hazardous undertakings and certainly are not worth the great risk involved. Running suddenly into a busy street or road to catch a ball or to escape being "tagged" costs hundreds of young lives each year. Hitching rides on the back of trucks, busses and private cars, and standing in a traffic lane to "thumb" a ride are the dangerous pranks of ill trained children. Although automobile drivers are by no means blameless, thousands of school children have been killed and injured through no fault of the driver.

Other dangers which city and country children share are those attending the use of roller

skates and bicycles. Surely there are no better sports than skating and cycling, but it is only common sense to obey well established traffic rules. The human body offers little resistance to the tons of cold steel in a modern car!

The bicyclist must be particularly careful not to zigzag along the street; he must ride in the right lane so that faster vehicles can pass him, and he must learn to signal his intention to stop or turn when he is riding in traffic. Every bicycle should be equipped with a headlight and a rear reflector light if it is to be ridden after dark; this is essential for safety.

Stop, Look and Listen!

A skater must observe every pedestrian rule in both city and country. He should remove his skates before attempting to cross a busy thoroughfare. As a matter of fact, the skater ought to go to what may appear to be ridiculous extremes to avoid an accident. A child on skates is not nearly as competent in traffic as he is afoot. It is my belief that the child who habitually leaves the sidewalk to skate up and down a city street ought to be arrested and required to appear in juvenile court so that he will receive the kind of a reprimand from a judge that his parents have for some reason failed to administer to him.

The careful bicyclist realizes that it is only common sense to obey established traffic rules.

Providing safe transportation for children who live beyond a walking distance to school is a major problem in many communities. Several million children are carried daily in school busses. These are, for the most part, under the control of local school authorities. The terrible tragedies involving school busses reported in the press bear witness to the fact that many of them are by no means safe. Frequently a truck which has outworn its usefulness for hauling grain or stock is drafted into service to carry children. A ramshackle body is hammered together; it is fastened to the chassis with a few bolts, and a boy or girl who attends the school is hired to operate it. What can a parent do in a deplorable situation like this? The answer is simple. If parents desire their children to ride in safe vehicles, they should insist that school authorities provide them, but as members of the community they must be willing to pay the not too exorbitant price for them. Even the wisest of school boards cannot be expected to make $200 buy an $800 bus.

No School Bus Should Ever Be Overloaded

For safe transportation, school busses should be especially designed and constructed for carrying children. The center of gravity should be low to minimize the danger of tipping; the service door should be under the control of the driver and so built that it will not open if a child leans against it; there should be an emergency door; the windshield and windows should be of nonshatterable glass; the gasoline tank should be located, filled and vented outside the body; the bus should be equipped with windshield wiper, rear vision mirror, fire extinguisher and tire chains; competent mechanics should check the headlights, brakes, tires, steering apparatus, horn and other mechanical fea-

To the right, a school boy patrol requires a pupil to remove her skates before crossing the street.

National Safety Council

tures of the car at regular intervals. No school bus should ever carry a greater load than that for which it was designed.

The vehicle itself is, of course, only one item in safe school transportation. The driver is at least of equal importance. He should be not less than 18 years old and should be selected for dependability, good habits, knowledge of the rules of the road, and tested ability to drive a bus properly. He should also be aided by a definite set of rules drafted for him to follow. These should include checking vital parts of the bus before starting out in the morning; never driving faster than 30 miles an hour; never leaving the bus while the motor is running; always stopping at railroad crossings; never operating the bus with the door open; stopping at safe places for the children to board and alight, and reporting regularly the condition of the bus to the school superintendent.

However, even the bus and the driver are not all there is to safe transportation. There are the children, and they should be taught certain important lessons. They must not wait in the road for the bus; they must not extend their arms or heads out of the windows; they must never attempt to board the bus or alight while it is in motion; they must obey the driver, and they must be taught to observe classroom conduct in the bus. Both parents and teachers can help in educating and disciplining the children.

Rules for Drivers, Young and Old

The last group of school children to be considered are those older ones who drive to school. They should be taught the fundamental lessons about moving vehicles which every thoroughly competent driver understands. The first rule is a physical law of motion which may be stated as follows: A moving body tends to continue in uniform motion in a straight line. Many a young driver is painfully surprised when he tries to turn sharply on a slippery pavement, and his car, instead of turning, skids straight ahead.

The second is in regard to speed, and it also involves an unchangeable law of physics from which no judge can let one off, and for which no friend can fix one's ticket. Every moving object has energy, and in the case of the automobile accident this energy must be used up in bringing the vehicle to rest, usually to the detriment of the car and its passengers. The faster a vehicle is going, the more damage it can do to itself, and the more injury it can do to the people riding in it. This is doubly true because the car's energy increases as the square of its speed. Thus, a car going 40 miles an hour is not twice but four times as potent an instrument of destruction as one going 20 miles an hour.

The seriousness of the accident hinges largely on how quickly the energy of the moving vehicle is absorbed. If brakes are applied in time to take up part of the energy and if the car can slide or roll for some distance after the crash, the damage even at extremely high speeds may be surprisingly little. However, if the car stops suddenly by running headlong into another car, a tree, masonry abutment, or other practically immovable object, the results are just about the same as they would be if the vehicle were dropped from up in the air onto the ground; for it is the suddenness of the stop which, in dissipating the necessary energy, creates the forces to wreck the car and mangle the passengers. Thus, a car hitting the concrete retaining wall of an underpass at 40 miles an hour will smash up just about as badly as it would if it fell off the roof of a five-story building. For other speeds the figures are as follows:

Speed of Vehicles (Miles per Hour)	Height from Which Car Would Drop to Attain Same Velocity and Speed (Feet)
20	13
30	32
40	54
50	78
60	120
70	162
80	212

The same fellow who has convinced himself that there is no particular danger in driving at 60 miles an hour would hesitate considerably before walking along a cornice twelve stories above the street; yet a little slip in either case might mean a sudden stop from a speed of 88 feet a second.

The youthful driver is, for the most part, fairly skilful in the manipulation of a machine. Handling the controls of a modern car, as a matter of fact, is simple; but to be a safe driver he must also have a mature attitude toward driving. If, for instance, he is liable to speed in places which he knows are dangerous and to graze pedestrians and other cars, his intentions are not necessarily evil; they simply may not be mature. The young driver, moreover, must be particularly careful because his limited driving experience does not enable him to judge the hazards of common situations as quickly as is necessary.

Safety Education Will Make School Days Safer

These difficulties encountered by young drivers are reflected in their automobile accident record. Drivers under 20 years of age have the highest accident rate of all age groups, an accident rate 41 per cent higher than the average for all drivers.

The awful toll of the automobile accident among children is being reduced, but only in those communities in which parents and teachers unite in an effort to teach the children the fundamental lessons of safety. School days will be safer days when effective safety education becomes universal.

The young man to the right in the picture above is one of 1,000 children who have been taken for a two week period from the lower East Side of New York City to Camp Henry, maintained on Lake Mohopac by the Henry Street Settlement. A girls' camp is established 14 miles away

Al, the chef at Camp Henry, knows that milk is an ideal food for growing boys. And how they enjoy it!

CAMP DAYS
For City Children Bring Broad Grins

Some one shouts, "Let's have a soap-suds contest," and the war is on. The boys will probably long remember this battle as the major cleanup!

Fishing is one of thirty-three hobbies which may be selected at Camp Henry by these boys. "How are they biting today, young fellows?"

Photos by Paul Parker

JANEIL SHOP

By R. T. Thompson

CLARA and Mamie were friends who had gone through high school together. They had many things in common. Both had an appreciation of beauty and unusual skill in creating something lovely if they were given a needle and thread and a bit of fine material with which to start. Both came from homes in moderate circumstances and felt the need and the desire to help in their own support as soon as possible after their school work was completed. Both had suffered from infantile paralysis and had been left so handicapped that they could get about only with the use of crutches or wheel-chairs. It was natural then that they should have the same question on completion of their school work. This question was, what to do with their assets—alert minds, nimble fingers and an appreciation of beauty.

Miss Jane Neil, who had been principal of Spalding School for Crippled Children for fourteen years and was Chicago's foremost woman worker among crippled children, had asked herself the same question many times as she had watched ambitious handicapped young people go from the school to an unequal struggle for a chance to use their abilities. The vocational guidance bureau to which these young people came for advice on completion of their school work was constantly faced with this question and was constantly seeking a solution. The teachers and principals in the schools for the crippled, who knew personally the struggle these children had made and the courage and optimism with which they faced life, were keenly conscious of the need for opportunities for those who could not go into industry because their physical handicaps prevented the use of stairs, street cars, public busses, and the like. Were these alert young people doomed to sit in wheel-chairs and look at four walls day after day with no prospect of useful activity or accomplishment?

The Janeil Shop is an attempt to answer this question for one group. The shop is named in memory of Miss Jane Neil, who did so much to make it possible and who died last year still planning to extend its development. The business of the shop is to create lovely dresses for little girls, little brother suits, doll dresses to match the children's costumes, and various novelties, such as bags, rugs and table runners, all made by hand. The ideal of each worker is to make these things so irresistible that no mother, grandmother or aunt can refuse to buy. The enthusiasm that is put into their fine stitches can probably not be equaled in Chicago. A bit of organdy or dotted swiss, some bright colored threads—and presto, there is a charming little dress with smocking, embroidery or "what you will," just the type of dress one would pick up on a trip to Europe and prize because of its beautiful handwork.

The Janeil Shop was organized late in 1929 and was introduced by the Chicago Woman's Club in December of that year in its "wee maid" style show, which was given to display the models the girls had made. The Woman's Club has continued its interest in the shop, and other women's organizations, such as the Drama League of Evanston, the Dorothy Kahn Club and the Sunbeam League, have encouraged its development in various ways, by a loan, a bene-

fit, various exhibits and, most important, regular customers among their groups.

The work is at present carried on in sunny cheerful rooms in the Spalding and Christopher schools, public schools for crippled children. This arrangement was made in the beginning as a temporary measure until such time as the shop could establish its own central working and sales headquarters. General financial conditions since the beginning have prevented the realization of these hopes, so the schools have continued to mother the project which aims to fill so real a need. The teachers in the household arts departments have supervised the sewing, have done the buying and have taken charge of sales displays for exhibits. The principals of the special schools have taken the most active interest in promoting the shop in every way.

There are, however, certain unavoidable disadvantages in being located in the schools: hours are short, holidays are frequent and not coincident with slack business seasons, and the schools are not located in the most convenient places for patrons. In spite of these disadvantages and of carrying on during a depression, the income of the shop during its three years has been $4,988.16, of which $3,821.99 has been derived from sales and the remainder from contributions. The girls have been paid the difference between the sales price and the cost of materials plus minor miscellaneous expenses.

The girls have all had sewing training in their school work, but no one is allowed to become a part of this shop until she has completed a course in sewing with this particular commercial work in view and has achieved a certain standard of excellence.

The teacher for this special training has been provided by the Illinois Board for Vocational Education, Division of Rehabilitation, an organization which is extremely conscious of the need for such a shop and of its potentialities. Cooperating in the training, which is the field to which it is limited, the board recently engaged a former sewing teacher in the public schools who three years ago was herself left crippled as the result of infantile paralysis. In her early twenties, while traveling in Europe, this teacher contracted infantile paralysis and was transformed in a week's time from an exceedingly active and energetic young woman to a wheel-chair cripple. She has faced the reorganization of her own life with a balance and courage that only the strongest and healthiest personality could achieve. There is no trace of invalidism in her outlook or attitude, and there could be no trace of invalidism in the attitude of the shop under her supervision. She has brought technical skill and business ability to the shop; but an even more important contribution has been her unusual understanding of the problem of the individual who is physically handicapped but equipped in every other way to compete industrially.

The chairman of the Janeil Shop Committee is the wife of a physician. Her enthusiasm, multiplicity of ideas and energy in working them out have made the girls' objective, "a shop of our own," seem much nearer. The chairman's vision of the shop is not limited to the making of children's clothing, for after all there are crippled boys and crippled girls who can never be expert with a needle but may be trained to be expert in other lines. The Janeil Shop is the first unit in what is hoped may later be a group of shops, each with its own specialty catering to some special needs of children. The development of other types of work depends on the success of this unit.

At present there are seventeen girls working in the Janeil Shop, and there are fifteen others who are trained for this work. Others want training as soon as the output warrants their admission. Each year will bring new applicants, as there are now 1,910 children in the special schools for the crippled, ranging from prekindergarten through high school. Some of these children can be so rehabilitated by expert medical care that they will return to regular schools and later compete on a more even basis

The Janeil Shop, conducted in a public school for crippled children, affords happiness, courage and a measure of economic independence.

for employment. A few may be unemployable; but many will fall into the group that has been described as "children who are able and willing to work in sheltered workshops under protected conditions." This group presents a social and an economic problem which must be solved. The schools are paving the way to a solution in the development of this shop; and while they know they cannot continue their supervision indefinitely, they hope to have this project taken over eventually by outside organizations and developed in accordance with the ideals which they have had for it. One of these ideals is that the name Janeil shall always mean not only "made by handicapped workers" but also "quality."

BRIEF HEALTHGRAMS ✣ from Articles in This Issue

¶In the preface of "I Want to Know," a serial by Dr. Oscar Reiss and Dorothy W. Baruch, Prof. A. J. Carlson of the University of Chicago comments: "The present work is a noteworthy attempt to put the elemental facts of anatomy, physiology and health in a language intelligible to the youngest child in the grades."
See page 836

¶The physical examination is so vitally important that no child should enter school without it. Assure your child a fair start and continued attendance at school by taking him to your family doctor immediately if you have not already done so. *See page 784*

¶The awful toll of the automobile accident among children is being reduced but only in those communities in which parents and teachers unite in an effort to teach the children the fundamental lessons of safety. *See page 815*

¶Approximately 5,000 more sight-saving classes are needed in the United States to provide educational advantages for children with impaired vision, for it is estimated that 47,000 pupils in the entire school population are suffering from defective vision. *See page 812*

¶It is by building with blocks, by climbing, sliding, balancing and such muscular activities as a child may enjoy at nursery school that he learns initiative, self confidence and muscular coordination as well as a regard for the rights of others of his own age. *See page 805*

¶One must know the elemental principles of anatomy and physiology by virtue of which the miracle of life begins before one may expect to teach the subject of reproduction. *See page 801*

¶When the ax begins to fall on government budgets, let us hope that the health department of the schools will be spared us. *See page 781*

¶Approximately 750,000 boys and young men play football each year. During the season of 1931 at least fifty players were killed in this game; numerous others were injured. Obviously the number of deaths and injuries is sufficient to demand special and immediate consideration. *See page 776*

¶The mother who will call on the teacher with an open mind and an interest in education will find herself enthusiastically welcomed and will definitely aid the child in adjusting himself to school life. *See page 791*

¶Cooperative dormitories provide an educational experience of the most vital sort if a person finds himself a happy contributor to the whole living régime of his group and if he learns to live simply and graciously with others.
See page 777

¶Janeil Shop provides occupation, happiness and courage for seventeen physically handicapped girls who create pretty pieces of handwork which are sold in Chicago. *See page 820*

¶It has been found that mental progress and physical fitness tend to go together. Children who rank high mentally are, in general, most fit physically. Through play impulses the race has developed its powers of mind and body.
See page 788

¶Antitoxin is a specific cure for most cases of diphtheria, but its treatment does not kill the germ of diphtheria, does not prevent the spread of the disease and does not assure that the cured patient will not be a carrier. *See page 828*

¶An understanding of first aid means that you know how to determine the seriousness of the accident, that you send for a doctor, that you stop the bleeding, that you restore breathing and that you make the injured person as comfortable as you can. *See page 823*

¶Years of careful training presumably influence the child to choose and consume a well balanced meal. He may see that his lunch always includes a hot food or beverage, a fruit or vegetable and a meat or meat substitute, usually as sandwich filling. *See page 806*

¶The course in health education at the Southern Illinois Normal University is a required subject given to college sophomores in a twelve week period. The course is divided into three major parts: personal hygiene, sanitation and the teaching of health. *See page 840*

TRAINING FOR ATHLETICS AND HEALTH

By ALFRED E. PARKER

CHAPTER IX

Accidents and First Aid

EVERY boy should know how to give first aid to the injured, for every boy sometime may have a chance to help in saving some one's life. Inability to give such aid may result in a tragedy, leaving only sorrow and regret.

Why not forestall such regret? To be qualified to aid a person who has been accidentally injured does not require long study. In truth, an understanding of first aid means that you know how to determine the seriousness of the accident, that you send for a doctor, that you stop the bleeding, that you restore breathing and that you make the injured person as comfortable as you can. More important still, you must remember that you are not giving permanent treatment; leave that to the doctor. You are the first to give aid, and that aid should be given to keep the patient safe and comfortable until the physician arrives. Beyond such help you should not venture.

"Knowledge Is Power"

Every day brings forth excellent demonstrations of how well some boys master a knowledge of first aid. The following illustration was recently brought to my attention:

In an automobile accident, occurring in the crowded traffic of a city street, a man was hit and quite seriously injured. According to the report of the accident, made by a witness who saw the happening from his sixth story office window, a number of persons soon gathered around the injured man, but they did not seem to know how to aid him. Presently a boy about 16 or 17 years old rushed in among the gathering spectators and took command of the situation.

Later, when this boy was asked to write an accurate account of just what aid he gave, he wrote the following:

"When I came on the people around the injured man and saw that no one was giving him help, I immediately took command and ordered the crowd back. I had to order the crowd back because the poor man was surrounded so closely that he could not get any fresh air.

By looping a coat or rope under the victim's head, one may drag him away from a live wire.

"The second I reached him I was quite sure that he was seriously injured and suffering from shock. He did not move; his skin was pale, and his lips and hands were blue. I also found that his body was cold. I could hardly feel his pulse, and his breathing was jerky. He'd take a long breath and then a short one.

"I was sure that it was shock, and I asked a man standing near to call an ambulance quickly. The next thing I noticed was quite a bit of blood on the ground near the injured man's right leg. The leg of his trousers was soaked, and the blood was increasing; so taking my knife I ripped along the seam of the trousers and found that he had received a deep wound. I knew that an artery had been cut as the blood was a bright red and was spurting out.

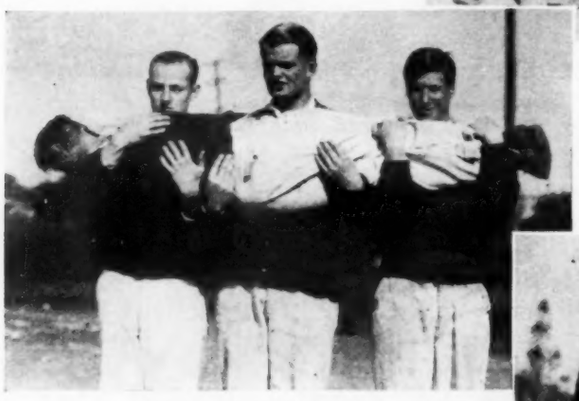
Safety First, Last and Always

"Using my closed jacknife for a pad by wrapping it in a portion of a borrowed handkerchief, I placed it 2 or 3 inches above the wound where I knew it would be pressing against the bleeding artery. Then with my handkerchief I bound the knife against the artery. I did this by wrapping the handkerchief around the leg and over the pad and by tying the ends together in a hard knot. Placing a pencil under the knot, I twisted it around tightly to secure sufficient pressure to stop the flow of blood. I did not cover the wound as no one possessed a first aid kit containing compresses, and I knew it would be safer to leave the wound open to the air than to put on a bandage that was not sterilized.

"As soon as the bleeding was stopped, I treated the man for shock. I sent one of the spectators to a restaurant for a cup of coffee,

and from another bystander I secured an automobile blanket and covered the injured man, for about the best help a first aider can give in case of shock is to keep the body as warm as possible. This I did, in addition to keeping the man's head low to allow the blood to return to the brain. I accomplished this by placing my coat underneath his back.

"The driver who had hit this man was quite excited all the time I was working, and he kept insisting that he be allowed to take the man in his car to the hospital. I would not allow him to do so, however, because I knew that the patient should not be moved until the ambulance arrived. Nevertheless, the driver kept shouting at me to let him take the man, and I finally told him to keep still, showing him my first aid certificate. After that he seemed to have a little more confidence in my ability to help.



The picture above shows a one-man carry; to the left is shown a three-man carry and below, a two-man carry.

"Before the doctor arrived, I loosened the tourniquet for a few seconds. This was necessary to restore circulation. If I had not done so, the part of the leg below the tourniquet might have died and become useless.

"Some people have expressed surprise that I 'knew so much,' as they put it, about first aid; but what I did to help this man seemed perfectly natural after my study of first aid, and I know a lot of boys who could have done just as well as I did if not better."

How about you? Could you have handled the injured man as well? At first thought, it is true, what this boy did seems to require considerable knowledge; but, after all, he merely possessed calmness enough to attend to a few simple operations. Had he, however, been as inexperienced in first aid as the reckless driver who wanted to move the man immediately to a hospital, permanent injury and perhaps even death might have resulted.

If you will read the account again, you will see that this boy first aider was not hurried; he took time to ascertain the nature of the man's injury. The boy saw that his motionlessness, the palor of his skin and his labored breathing were, among other signs, evidence that it was a case of shock; and shock always requires the attention of a doctor, whom he summoned the second he had finished his survey.

Searching farther, he found blood. Whenever a first aider finds blood, he must immediately discern whether an artery or a vein is bleeding. Blood from an artery is always bright red because it is freshly made, being pumped by the heart to all parts of the body. On the other hand, blood from the veins is a dark, bluish red; it is the impure blood going back to the heart to be purified, and it flows continuously instead of in spurts as does the blood from an artery. This boy knew that an artery was bleeding, that the rapid flow of blood might cause death and that he must apply a tourniquet.

Indeed, the knowledge displayed is simple; yet had he possessed a half knowledge of first aid, the result of his work might have meant serious consequences for the injured man. Suppose, for example, this boy had been unable to distinguish between bleeding from a vein and bleeding from an artery. The result might have been disastrous, for results can be disastrous if exact knowledge of first aid methods is not possessed. So when you study first aid methods—and you should study them—learn them thoroughly. Know that you know how to administer first aid!

When an artery is bleeding, be sure to apply the pressure on the side of the wound nearest to the heart. If a vein is bleeding, the pressure should be applied on the side of the wound away from the heart.

If you are unable to find a pressure point which will stop the bleeding, apply the pressure

directly on the wound. When this is done, a piece of sterile gauze should be placed on the wound to prevent infection; but if you do not possess such gauze, apply pressure anyway rather than let a person lose a large quantity of blood.

Occasionally bleeding occurs from the mouth and nose. When bleeding from the mouth takes place, see that the person afflicted is kept quiet, being made to lie on his back in a comfortable position with the head turned so that the blood will not be drawn into the lungs. It is helpful also to place ice bags or cold compresses on the chest and the upper portion of the abdomen. Of course, a physician should be called at once.

Unless caused by a fracture of the skull or some other equally serious condition, ordinary bleeding from the nose is easily treated. This can be accomplished by holding the nostrils together and by placing cold cloths or compresses over the nose or at the back of the neck. Another method is to wet a piece of paper towel thoroughly and place it between the upper lip and teeth.

Bleeding is not difficult to care for if you know what type it is. For example, besides the veins and the arteries which carry impure and pure blood, the capillaries, which are hairlike extensions of the arteries, also convey pure blood to practically every part of the body. In fact, it is the vast network of capillaries that gives the rosy color to the skin. As you know, the slightest cut or pin prick will cause bleeding, for the capillaries have been opened.

Bleeding from capillaries is not dangerous except in the possibility of infection. Boys the world over seem to take the matter of infection lightly. They do this, regardless of warnings, until they themselves have an infected wound, and then the lesson they learn is a painful one, never to be forgotten.

No Scratch Is Too Slight to Merit Attention

In a certain high school in the northwestern part of the United States, a boy had this experience with an infection. Strange as it may seem, the week before this boy's leg became infected, the athletic coach had earnestly warned his football players to guard against infection. However, this boy, a halfback, came in from practice one evening with a slight patch of skin scraped off above his knee and, being in a hurry to get home for dinner, he neglected the coach's advice, thinking the scratch was so slight it was not worth any bother.

Infectious germs, however, would as readily begin working in a slight scratch as in a big wound, and they did begin in the case of this football player. In two days the infection had spread to the size of a dollar; by this time the sufferer was convinced it needed attention; but he was too late. There were weeks of misery ahead for him. The infection spread rapidly; the boy was taken to the hospital, and the doctors slaved frantically to save his life. This they did, but it was more than a year before he could use his leg again. This boy learned his lesson.

Interesting too is the fact that in the same hospital was a man, aged 35, who was also suffering from an infection. Two weeks previously he had received a pin prick while opening up a freshly laundered shirt. A pin prick, however, was nothing to this man. He forgot all about it! His wife suggested that he paint iodine on the small puncture, and he laughed at her. Three days later the pricked finger began to cause him severe pain; in two more days he was taken to the hospital. Blood poisoning had set in. In the attempt to save the man's life, the physicians had to amputate his arm, but it was of no avail. In two weeks from the time he was pricked by the pin, he was dead.

Now do not infer from the above incident that all who are pricked by pins die. Of course not! But people do die from infections starting in so small an opening. Because such a result can occur, you owe it to yourself to know how to care for the slightest opening of the skin.

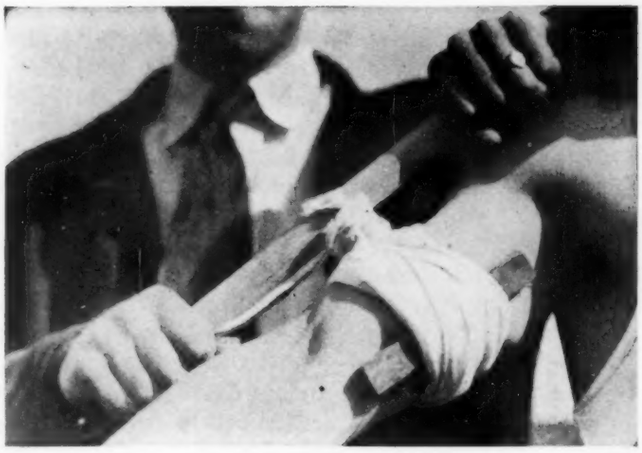
Germs Have No Reticence

You know, of course, that the skin covers the entire body. It has several purposes, one of which is to protect the body from the entrance of dangerous germs. Even so slight an opening as a pin prick will allow germs to enter. When the skin is accidentally opened by a cut or a tear, hundreds of infectious germs may be on the object that caused the wound or on the clothing next to it. For safety, assume always that the germs are there.

Naturally, when the skin is opened, every effort should be made to destroy these vicious germs. Killing these enemies is most often done by applying tincture of iodine. Nature helps, too, in cleaning away the germs by the flow of blood. Therefore a moderate amount of bleeding is helpful, although soon after the skin is opened, iodine should be spread into and around the wound. Even when the skin is pricked by a pin, the slight opening should be painted with iodine.

Furthermore, in using iodine, remember that a concentrated solution of iodine would cause a burn. Always use tincture of iodine, a mixture of iodine and alcohol. In addition, remember that tincture of iodine kept in a bottle from which the cork is frequently removed will become stronger because of the evaporation of the alcohol. This being the case, it is wise to get a fresh supply of iodine frequently.

Some persons contend that iodine should be used only by a doctor. To be sure, the first aider will do well to use it sparingly; but a doctor cannot always be secured immediately, and wounds must be protected from infection.



First aid to the injured includes the immediate application of an improvised tourniquet to stop the flow of blood.

Further, in applying iodine as a first aid measure, not only should it be used lightly but also it must never be used close to the eyes or on a burn.

Strange as it surely is, boys often make the mistake of thinking that a wound can be washed out with water; but water, stranger still, contains germs. Even peroxide of hydrogen is not sufficiently strong to kill all germs, and when used in a deep wound it may wash the germs into the uninfected section, causing infection. It is best to adhere to a moderate use of iodine.

After the iodine is applied, there is one further process which is important, and that is the covering of the wound with a sterile compress. A compress is usually made of gauze and cotton, the outer covering being gauze. Gauze is always best next to a wound, because cotton sticks.

Wound Coverings Must Be Sterile

Covering the wound with a gauze compress is necessary because it keeps out germs, absorbs the flowing blood and helps to control bleeding through the formation of blood clots. Being next to the wound, it is especially important that the compress is free from germs, that it is sterilized. Sterile gauze is gauze on which the germs have been destroyed by heat. Such compresses can be purchased at a drug store, and they are always found in regular Red Cross first aid kits. True, it may be necessary sometimes to use a clean handkerchief or towel; never do so, however, unless you are compelled to, for such a covering, not being sterilized, may harbor infectious germs.

Even if the wound is a slight one, a sterile compress should be used. Success in preventing infections depends on how careful you are in covering a wound properly. Furthermore, when covering a wound, never place adhesive tape over an opening. In the first place, adhesive tape was never intended for such a purpose, its chief purpose being to hold a bandage or compress in place. To use it over a wound seals the wound so that germs already there may increase under favorable conditions; besides, the adhesive plaster itself is liable to be covered with germs.

While sterile compresses are used to cover burns and scalds, such damage to the skin is treated somewhat differently from a wound that is caused by cutting or tearing. Burns and scalds may be of three degrees: the first degree occurs when the skin is merely reddened; the second degree when blisters appear, and the third degree when the tissues are destroyed. All third degree burns are dangerous. So, too, are first and second degree burns when they cover wide surfaces. Because this is true, first aid treatment should usually be followed by a physician's expert care.

Most helpful of all, in treating a burn, is to cover the burned surface with carbolated petrolatum. Petrolatum prevents the growth of germs, decreases pain and allows the dressing to be quite easily removed. After the carbolated petrolatum is spread on the injured area, it should be covered with a sterile gauze compress, and a bandage should be wrapped over this to prevent air from reaching the burned areas. When large portions of the body are burned, help can be given pending the doctor's arrival, by soaking a sheet of gauze in olive oil or linseed oil and placing it over the destroyed surface. Iodine is never used on a burn.

The Practical Joker Stages a Tragedy

Burns are often accidental, and yet, in many instances, they result from carelessness. On several occasions, I have had to care for boys who received severe burns after having foolishly turned on a shower and jumped in front of it without first testing the temperature of the water. Why any boy would not test the temperature of the shower water with his hand before jumping in front of it is hard to understand. One boy who suffered from a first degree burn turned the handle marked "cold water," but some practical joker had switched the handles. One can never be sure of the temperature of a shower unless one tests it, and the realization of the seriousness of a first degree burn should always remind one to take this simple precaution.

To return to the subject of bleeding, the person losing blood frequently will faint. Therefore the first aider must know what treatment to give in such cases. Fainting occurs when the supply of blood to the brain is reduced, resulting in partial or total loss of consciousness. After fainting, the breathing is shallow; there is extreme paleness; the pulse is rapid and and feeble, and beads of cold perspiration appear on the forehead.

Treatment of fainting is accomplished by placing the unconscious person in the fresh air

in a supine position with the head low and the feet raised. The patient's clothing is loosened, and cold water is dashed in the face. The cold water causes a sudden intake of breath, restoring consciousness.

It is possible to anticipate a fainting spell, and it can be prevented by holding the head between the knees for a short time. This position causes a sudden return of blood to the brain. Loss of blood, moreover, is not always the cause of fainting; it may be prolonged mental or physical effort followed by fatigue and exhaustion.

Protect the Eyes, for They Cannot Be Replaced

I have already mentioned the danger of using iodine on a wound close to or in the eye. Indeed, there is a real danger, for these valuable little cameras, the eyes, are most delicately made. Because this is true, it is especially desirable to know how to care for the eyes when they are injured.

Injury to the eye is often caused by getting "something in the eye." It may be a bug, a bit of dirt, or a tiny particle of wood, steel or other substance. The eye in which a foreign body of any kind is lodged should be given care by a physician as soon as possible. Meanwhile, it should be protected by a sterile pad, the eye being kept closed.

Acid solutions should never be allowed to get near the eyes. Guarding against such accidents will mean constant vigilance. The eyes are precious; once lost, they never can be replaced.

Other injuries, the care of which may mean that sometime you can help to save a human life, are those occurring when the body comes in contact with an electric wire. To be of any help in such an emergency, you must, first of all, be able to remove a person in contact with a live wire. This can best be done by taking your coat, a dry piece of cloth or a rope and, without touching the victim yourself, looping it under his head, dragging him from the wire. Always you must keep in mind that it is dangerous to touch the victim on the wire. Of course, if you had rubber gloves, you could seize the person by the armpits and lift him from the wire; but rubber gloves are seldom available.

After removing a person from the wire, you must administer artificial respiration if normal breathing has ceased. This is done by the Schaefer or prone pressure method of artificial respiration, the method used for a drowning person; this will be described in detail in a later chapter.

Finally, knowledge of first aid should, of course, include methods of carrying injured persons, for there are times, when one is far from a doctor, when it is necessary to move them. Because the injury may be increased during transportation, much care must be taken in the operation. Frequently, boys on the athletic field or on a hike have occasion to carry an injured friend. To do this task incorrectly may mean added and unnecessary injury.

If an accident occurs in the woods, a stretcher may be improvised by putting two poles through the sleeves of a coat or a sweater. Once you have a stretcher made, the next problem is to put the injured person onto it. The ideal method is to have three to help in lifting him. They should kneel on the side of the patient away from the stretcher, each one having the right knee raised. By lifting the person gently to the right knees of the carriers, the patient can then be transferred to the stretcher without injury.

When lifting a person onto a stretcher, it is best to do the lifting on the side opposite the injury. In any event, the injury, or the part of the body close to the injury, should not be jarred. It is best also to tie the patient's feet so that they cannot be moved, thereby avoiding further injury; in addition, the patient should be covered carefully with a blanket to keep the body warm.

Safety and Comfort May Be Combined

If a stretcher is not available, three boys can execute a safe carry by taking the position used when the patient is to be lifted onto the stretcher. As soon as the patient is raised to the knees, his body should be turned so that it is next to the chests of the three carriers. All carriers should keep in step so that the body motion of the supporters will be smooth.

Two boys can carry an injured person if each grasps him with one arm under his thighs and the other arm around his back just under the armpits. The carrying weight can be shared equally if the carriers act in unison. Furthermore, one boy can execute a carry in the following manner: the injured person is grasped around the waist by the carrier's right arm; the left arm of the injured person is thrown around the carrier's neck and is held with his left hand. This method is possible when the injured person is able, at least, to stagger along.

In summary, it may be said that this chapter has presented several sound principles of first aid that should be common knowledge. In future chapters you will find many first aid hints which will be of value to you while in the mountains or at the seashore; and in the forthcoming chapters on training for athletic sports the hints on first aid to athletes will be of especial interest to you.

(To be continued)

Progress in Preventive Medicine

By P. M. Ashburn

PART VII

DIPHTHERIA has been one of the most dreaded of respiratory diseases and one of the highly fatal afflictions of childhood. Since the discovery and use of antitoxin in treatment, the disease is much less deadly or much more effectively treated than before, but it is still a serious disease. It is endemic in most countries; that is, it is nearly always present somewhere, and epidemics may start at almost any time, although they occur most frequently in cold weather and during the school season; this offers excellent opportunities for diffusion of the disease.

Healthy Carriers May Spread Diphtheria

Diphtheria fluctuates in virulence over long periods of time. There is some reason to believe that it has been relatively mild for many years; there is some reason to fear, on the basis of recent European experience, that it may be growing more virulent. The disease may kill in any of three ways: by toxin in the blood, by suffocation from obstruction of the larynx or trachea by false membrane, or by postdiphtheritic paralysis, especially if this affects the nerves of the heart or of respiration. The world in general is well educated to the fact that antitoxin is a specific cure for most cases of diphtheria, if it is administered in time. Available in every village in America, it is now being used in all recognized cases. But antitoxin treatment does not kill the germs of diphtheria, does not prevent the spread of the disease and does not assure that the cured patient will not be a carrier. There are many healthy carriers of this disease, as of typhoid, and they are sources of danger in schools, in dairies, in kitchens and, to a less degree, in other places.

In recent years it has been learned that persons having a certain amount of antitoxin in their blood are not apt to acquire diphtheria. The Schick test reveals whether or not the person tested has that protective amount of antitoxin; and the means are now provided for inducing the body to manufacture it if it is lacking. This is accomplished by the injection of small amounts of diphtheria toxin under the skin, in much the same way as horses are treated for the production of antitoxin. However, diphtheria toxin is a dangerous poison and a powerful irritant, and its use in children as in horses would be attended with risk and suffering. It has been found, however, that if the toxin is partly neutralized with antitoxin before its injection, both the risk and the suffering are avoided, and the body is still stimulated to the production of antitoxin. Such antitoxin, produced in the body itself, persists in the blood for long periods or continues to be produced and affords protection against the disease. On the other hand, antitoxin from the horse, when injected into a child, lasts but a short time and gives a protection measurable by days or at most by weeks. For these reasons there has in recent years been an active effort to educate parents to the importance and wisdom of having their children given the Schick test and, if the test shows a lack of antitoxin in the blood, having them immunized with the toxin-antitoxin mixture. In place of toxin-antitoxin some authorities favor the use of toxoid, which is toxin altered by age or by treatment with a drug, especially formalin, in such a way that it loses its most dangerous and most irritating characters, while still stimulating the body to the formation of antitoxin. Its advantage lies in the fact that no horse serum is injected with it, and the child is therefore not in danger of becoming sensitized to this serum or of suffering from serum sickness.

This movement for preventing diphtheria through active immunization of susceptible children is gaining ground, and many workers believe that through it diphtheria may be abolished. Whether or not this hope is justified, the practice has produced notable results in the reduction of the incidence of diphtheria wherever it has been widely applied, and it may be cited as one of the more recent triumphs of education in the prevention of disease. As no harm has resulted from this practice and much good has followed it, the educational efforts should be increased.

Second Attacks of Whooping Cough Are Rare

Whooping cough is one of the serious infections of childhood. Although it is by no means limited to that period of life, it is much more common then. It is a distressing disease to the parents as well as to the child. It may prove fatal, especially if the child has some other debilitating disease at the same time. This disease is not merely a common cold grown worse. It is due to a specific bacillus and is quite as specific a disease as diphtheria. Most persons are susceptible to it and have an attack at some time in their lives, usually in childhood. Second

Diphtheria has been one of the most dreaded of respiratory diseases and one of the highly fatal afflictions of childhood.

attacks of real whooping cough are rare, but other respiratory infections following it within a few months may cause return of the paroxysmal cough and whooping and may be thought to be second attacks. Whooping cough is transmitted by discharges from the respiratory tract, and the explosive cough may expel these in the form of invisible droplets for a distance of many feet.

Whooping Cough Mortality High in Infancy

Education has not been particularly effective in preventing this disease, as it is difficult of diagnosis but highly contagious before the development of the whoop. The most valuable fact to be impressed on all mothers is that this disease is most deadly to young infants and that the mortality declines steadily with age. This is fortunate, as infants are more easily protected from it than are school children. The child should be protected from coughs and colds as long as possible. The disease is also less apt to be severe or to have serious complications in summer than in winter; hence the protective measures should be more rigorous in winter.

Mumps is another contagious disease which is most common in childhood but may affect adults who have not had previous attacks. Although not properly a respiratory disease, as it usually affects only salivary glands, it is transmitted by secretions from the mouth and is best considered with diseases of the respiratory tract. Mumps is rarely fatal, and as the swelling of the parotid glands imparts to the face a ludicrous and silly appearance, it is often treated as a joke. However, it has dangerous possibilities through its complications. The most important of these are involvement of the testicles, sometimes with resulting sexual sterility, and paralysis of cranial nerves, with resulting blindness, deafness or muscular paralysis of the face or eyes. Happily the paralysis is rare, and the testicular involvement does not ordinarily interfere with marriage.

Pneumonia is a term signifying an inflammation of the lung, and it may be due to germs causing other diseases, such as plague, glanders, and "parrot fever," but commonly it is of one of the following types: (1) lobar pneumonia, which is characterized by consolidation of large masses of lung and is caused by the pneumococcus, or (2) bronchopneumonia, which causes less massive consolidation and is usually secondary to some other disease, such as measles or whooping cough, and which may be due to various microorganisms but most commonly is caused by a hemolytic streptococcus.

Pneumonia Is One of the Major Causes of Death

Either of these types may occur in children or adults, but the lobar form is more common in adults, the bronchopneumonia in children. Both forms are serious, and pneumonia is one of the major causes of death. Despite greatly increased knowledge of the bacteriology and pathology of the different forms, it cannot be claimed that much progress has been made in preventing them or that education has advanced far on the

road to success. Observation and experience show that while lobar pneumonia may occur in summer and as a primary disease, it is most common in winter and spring and is apparently often related to exposure, chill and fatigue; it is often a complication or sequel of some other respiratory infection, such as influenza or a severe cold. The best general measures of prevention are therefore avoidance of chill and exposure, and the exercise of the greatest care in regard to influenza and colds, preferably by staying in bed until they are cured. Vaccines have been advocated for the prevention of pneumonia, but the evidence as to their value is not convincing.

Bronchopneumonia is rarely an acute primary disease, as lobar pneumonia often is. It is nearly always a late complication of a cold, a sore throat, an attack of measles or other respiratory disease; it may be a late infection engrafted on some more chronic debilitating disease, such as chronic bronchitis, tuberculosis or typhoid. The best method of prevention is great care in the avoidance and treatment of the diseases which it is most apt to follow. This is the scope of the education justified by present knowledge. This much is safe and helpful.

Prehistoric Man Had Tuberculosis of the Bone

Tuberculosis of the lungs, or consumption, as it was commonly called, antedates written records and was probably suffered by prehistoric man; at any rate, fossils show that he had tuberculosis of the bone. Tuberculosis was long the greatest single cause of death of mankind, and in modern times the great Dr. Osler spoke of it as the "captain of the men of death." So long as it was not recognized until the period of lung destruction, phthisis or consumption, and was then attributed to humoral disorders, it could not possibly be controlled. Fracastorius wrote of contagious phthisis in the sixteenth century, but his ideas in regard to it were vague, and the treatment he prescribed for the destruction of the germs was quite ineffective for any such purpose. As a matter of fact, man had made scarcely any advance in the control of tuberculosis until after the discovery, distinctive staining and cultivation of the tubercle bacillus. The ability to identify the organism readily and to produce the disease in animals by inoculating with it led to animal experimentation and epidemiologic studies which resulted in such definite knowledge of the methods of spread of this disease and in such practical measures for the prevention of that spread that tuberculosis is much less common and much less deadly than it was, and it even is hoped that this scourge of the ages may be abolished eventually.

The methods of spread are mainly (1) transmission from patient to patient through droplet infection, through dust containing particles of dried sputum, by direct contact as in kissing, or

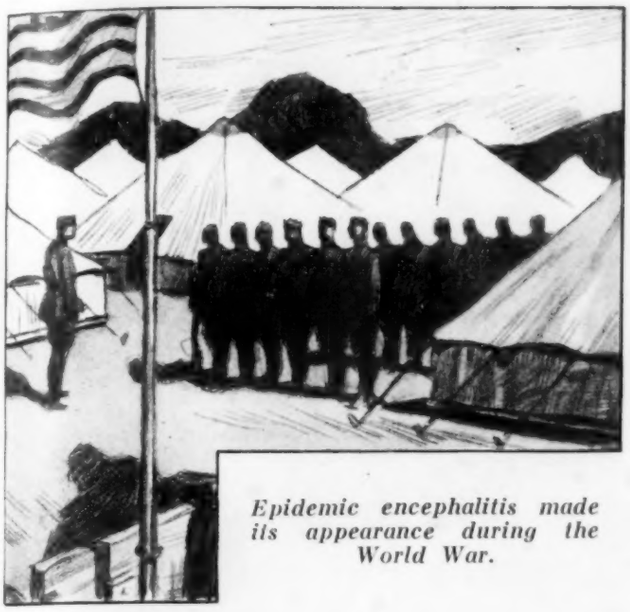
by indirect contact through clothing, handkerchiefs and utensils and (2) food-borne infection through the ingestion of milk or flesh of diseased animals which contain the bacilli. With these methods of infection brought under control, tuberculosis would soon cease to plague man.

Many animals are susceptible to tuberculosis, but much the most important, from the standpoint of control of the disease in human beings, is the cow. Milk and beef from diseased animals are sources of danger, but in only a minority of cases is the infection received from food. The careful inspection of meat and of dairy products and the pasteurization of milk are making the number even smaller.

Every Case of Tuberculosis Comes from Another

In the great majority of cases of tuberculosis in human beings, infection is received from other human victims, and for the past thirty years a campaign of education by antituberculosis societies, health departments, schools, teachers and medical men has taught the general public the dangers of spitting, the methods of caring for tuberculous sputum, the importance of early treatment for the sake of the public as well as for that of the patient, the value of registration, inspection and supervision of cases and of the segregation of the more dangerous cases in institutions, and the early detection of cases in the persons of exposed families. This has all had a splendid effect and has been of great importance in reducing the mortality.

However, tuberculosis depends not alone on infection. The great majority of persons acquire tuberculous infection at some period of their lives, but most recover from it to survive long years and die of other diseases, blissfully unaware that they have ever had any tuberculosis. There are doubtless many factors which account for this frequent mildness of the infection, such as the low virulence of a particular



Epidemic encephalitis made its appearance during the World War.

strain of tubercle bacillus, the dosage of the bacilli received, the length of exposure to infection, and the general health of the patient at the time of infection. But in a large sense, the most important factors are sociologic and are summed up in the general terms well being, standards of living, hygiene and nutrition, for tuberculosis is fostered by poor nutrition, poor housing, unhygienic working conditions and overwork. Education has been important in ameliorating and abolishing these predisposing factors and thus indirectly aiding in the deposing of tuberculosis from its position as "captain of the men of death." That it has been so deposed is shown in many ways, including the figures of the United States Census Bureau, which disclose that it is now exceeded as a cause of death by diseases of the heart, by apoplexy and softening of the brain, by cancer and malignant tumors, by pneumonia in its various forms, by nephritis and by accidental deaths. The death rate from tuberculosis and the percentage of the total deaths caused by this disease have fallen steadily for many years.

Tuberculosis Cannot Be Prevented by Drugs

Life insurance experience reveals the same improvement. In the year 1911 the tuberculosis death rate among white males insured in the industrial department of the Metropolitan Insurance Company stood at 230.9 per hundred thousand. In 1925, the rate was 84.3, a decline of almost two thirds of the total. The results obtained are eloquent. The Metropolitan statisticians say, "It is difficult to say wherein the greatest contribution has been made; but one cannot go far wrong in the assumption that there has been no more potent factor than the spreading of knowledge of prevention of tuberculosis. Moreover, the people have been taught by means of health education that tuberculosis can never be prevented (nor cured) by drugs, but that sunshine, fresh air, rest and cleanliness are the great preventives."

The results obtained by education in regard to a disease once regarded so hopelessly and helplessly as was tuberculosis constitute one of the great triumphs of disease prevention. Few diseases offer a darker outlook than did this one in former times. Once in possession of enough facts to constitute the basis of a real education, however, physicians were able to obtain results; but definite knowledge, demonstrated by experiment and observation, had to precede any useful education.

"Hope Springs Eternal"

From the time that Koch announced his tuberculin as a cure for tuberculosis, an announcement received with hope and enthusiasm and followed by great disappointment, there have been many attempts to utilize bacteria and their products in the prevention, diagnosis and treatment of the disease. Tuberculin has a place in diagnosis, and in the hands of experts it is useful in the treatment of some cases. For some years Calmette's method of attempting to immunize young children, especially those of tuberculous families, by infecting them with a living culture of an avirulent strain of tubercle bacillus, the so-called BCG, has found an increasing use in Europe but little in America. It may prove of great value, but the evidence in its favor is not as yet sufficient to justify its inclusion in a program of popular education. Sociologic, economic and hygienic improvements promise more.

Meningitis is a term properly applicable to any inflammation of the meninges or coverings of the brain and spinal cord. Such inflammation may be caused by a considerable variety of disease-producing germs, including those of suppuration, pneumonia, tuberculosis and syphilis. There is, however, a specific form of meningitis known as cerebrospinal fever, which often occurs in epidemics and is therefore known also as epidemic cerebrospinal meningitis. This is a serious and deadly disease caused by a germ known as the meningococcus. This germ may be found in the throats of healthy persons; therefore its mere presence does not assure the disease. There are also healthy carriers. Fortunately the disease, in spite of its occurrence in epidemics, is not highly contagious; it is not comparable with measles, not even so much as is diphtheria. Cases distinctly traceable to single carriers are uncommon, and it was shown in British camps during the World War that a high carrier rate denoted overcrowding and dangerously unhygienic conditions. The high rate showed itself within two or three weeks after the beginning of the overcrowding. A wave of high noncontact carrier rates preceded and accompanied outbreaks of the disease. This carrier *(Continued on page 854)*

Keystone View Company

NURSES HONOR FLORENCE NIGHTINGALE

Red Cross Day in London was celebrated by laying a wreath on the memorial dedicated to the most honored of all nurses.

Acme

NONSINKABLE BATHING SUITS

The girls to the left are shown in pneumatic swimming suits. Boatmen, yachtsmen, airmen, liner passengers and deep sea fishermen find the nonsinkable suits invaluable. To keep from sinking, try this method of inflation!

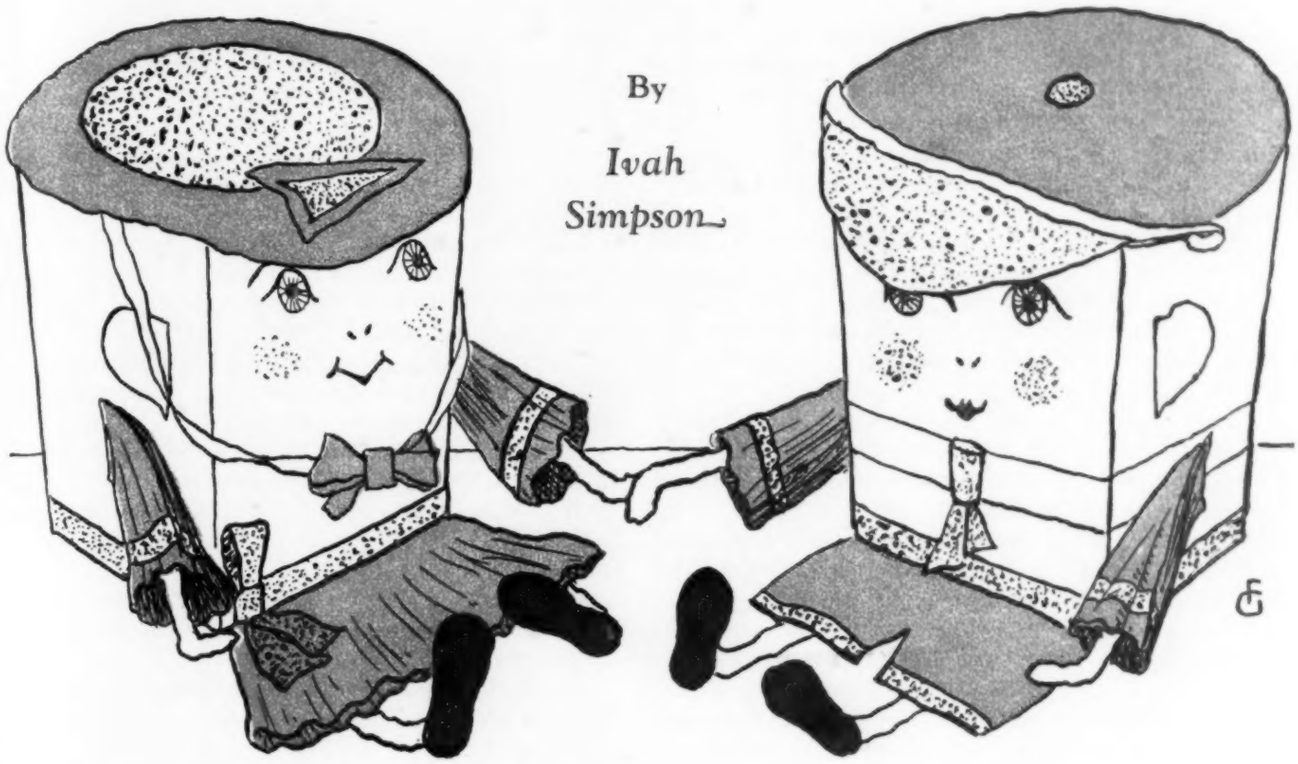
Roy-Pinney

TWO RUSSIAN CONTESTANTS ENGAGE in javelin throwing, an outdoor sport that develops grace, balance and precision.

The Freezer Twins

By

Ivah Simpson



I HEARD a giggle, and as I looked up from my book, there stood The Freezer Twins, Oran Orange Ice and his sister Ora, grinning at me through the picket fence that encloses my garden.

"How nice you children look," I said as I put my book down on the bench and hurried over to the fence. "Are you coming to call on me?"

But they both shook their heads in denial, while Oran said quite breathlessly, "No, we're going to Mary Lou's garden party. And just think of it! She's asked us to sit right on the party table—and—and the table is to be spread in the shade of the big elm tree."

"Yes, just think of it!" squealed his sister, clapping her hands in delight.

"And," said Oran smacking his lips, "we're going to have some little home-made cakes with orange icing on them."

"Oh! Oh!" cried Ora. "I can hardly wait. I just love parties, don't you?"

Then she blushed prettily, dropped her eyes and asked, "Won't you please let us help you entertain your friends sometime?"

"You know," spoke up Oran quickly, "we can help you any time you'd like to have us."

"Oh, yes," agreed Ora eagerly, "just any time."

"Come inside, sit down a moment," I suggested, "and tell me all about it."

So I helped them over the fence, and as we sat down on the grass, Ora began, "We're really hot weather children, and we love garden parties most of all; but we've dozens and dozens of different party costumes. So you see, we can help you with any kind of party you want to give, and we can always come dressed exactly right for the occasion."

"Wait a minute," interrupted Oran as he leaned over and whispered something in his sister's ear.

She nodded her head, smiled at him, and then said to me with a chuckle, "I suppose you've noticed that we're made of half pint ice cream containers, haven't you?"

But before I could reply, Oran, who was stretching his neck and running a finger under his white crêpe paper collar, said with a sort of gasp, "And I suppose you've noticed, too, that our faces are painted on the containers with colored crayons and that our arms and legs are made of pipe cleaners and our clothes of crêpe paper."

"Oh, not all our clothes, Oran," corrected his sister. "Our shoes, you know, are made of black construction paper."

"Yes, that's true," he admitted meekly. "I forgot about them."

"And you forgot something else, too," she said suddenly looking at him sternly.

"What did I forget?" he demanded crossly.

"You forgot to tip your cap to the lady, that's what," she replied.

"O-o-o-h!" he turned to me and said apologetically, "I'm ever so sorry."

Then as he put his hand to the green bill of his orange cap and tried to lift it from his head, the queerest look came over his face, and he said in disgust, "I can't tip it, Ora. I can't get it off. The silly thing is glued on tight."

"Oh, yes," she said flushing in confusion, "of course it is. I forgot all about it, Oran. It's pasted to the front part of your head, but it's loose at the back just as my hat is."

"What a queer way to wear a hat," I said in surprise.

"Indeed there's nothing queer about it," she assured me as she brushed some blades of grass and twigs from her tiny orange crêpe paper skirt. "It's left loose at the back so that the container can be opened and filled with orange ice or with ice cream."

"And don't you see," broke in Oran, "when you want to eat the ice cream or the orange ice, you can open up the containers again without removing our hats at all."

"Dear me," said Ora all at once with a puzzled frown on her little face, "what has become of the handles of the containers?"

Oran scratched one white paper ear, thought a minute and then said contemptuously, "Ora Orange Ice, you can't remember anything at all! The handle of your ice cream container forms the ties for your hat, of course."

"So it does," she laughed gaily, "and the one on yours forms the band on your cap, doesn't it?"

But he did not answer, for just at that instant there came a queer tinkling noise, and a tiny voice said softly, yet quite distinctly, "One—two—three—four."

"Who is it?" asked Ora in a whisper.

"Why," chuckled her brother, pointing toward the stone wall, "it's that little pink four o'clock over there. See it, Ora? It is telling us the time so we won't be late to Mary Lou's party. That wouldn't be polite, you know."

Then he jumped to his feet, pulled up his little orange knickers with their bands of green trimming, tightened his green belt and began to climb over the picket fence.

"Wait for me, Oran," cried his sister shaking out her skirts and straightening her green sash as she ran toward the gate.

I arose, hurried over to the fence, leaned over it, and as Ora joined her brother on the sidewalk I called out, "Come over tomorrow morning, children, and we'll plan a splendid party for next week."

"Hooray!" cried Oran, jumping up and down.

"Hooray!" squealed Ora, clapping her hands in delight.

Then they both waved good-by to me and hurried away as fast as ever they could to Mary Lou's party.

How to Make the Freezer Twins

THE Freezer Twins, Oran Orange Ice and his sister Ora, are on their way to Mary Lou's garden party. They dearly love parties and would be happy indeed if you would let them help you entertain your friends sometime. I'm sure they can do so!

The Twins present a novel way of serving ice cream, ices and sherbets. Grown-ups as well as children will find them amusing and easy to construct.

They are especially appropriate during hot weather, when garden parties are the vogue and refreshments are served outdoors. However, they may be used the year round, and you may dress them to carry out any idea or color scheme you wish.

Half pint ice cream containers which are free from printing or advertisements should be used. If you have difficulty in obtaining them, you can cover up the printing by pasting heavy white paper over the sides of the containers; or, you can make some containers out of white cardboard. Get one from an ice cream dealer, take it apart carefully and use it as a pattern.

The faces are painted with colored crayons on the containers. Ears made of white paper are pasted in place.

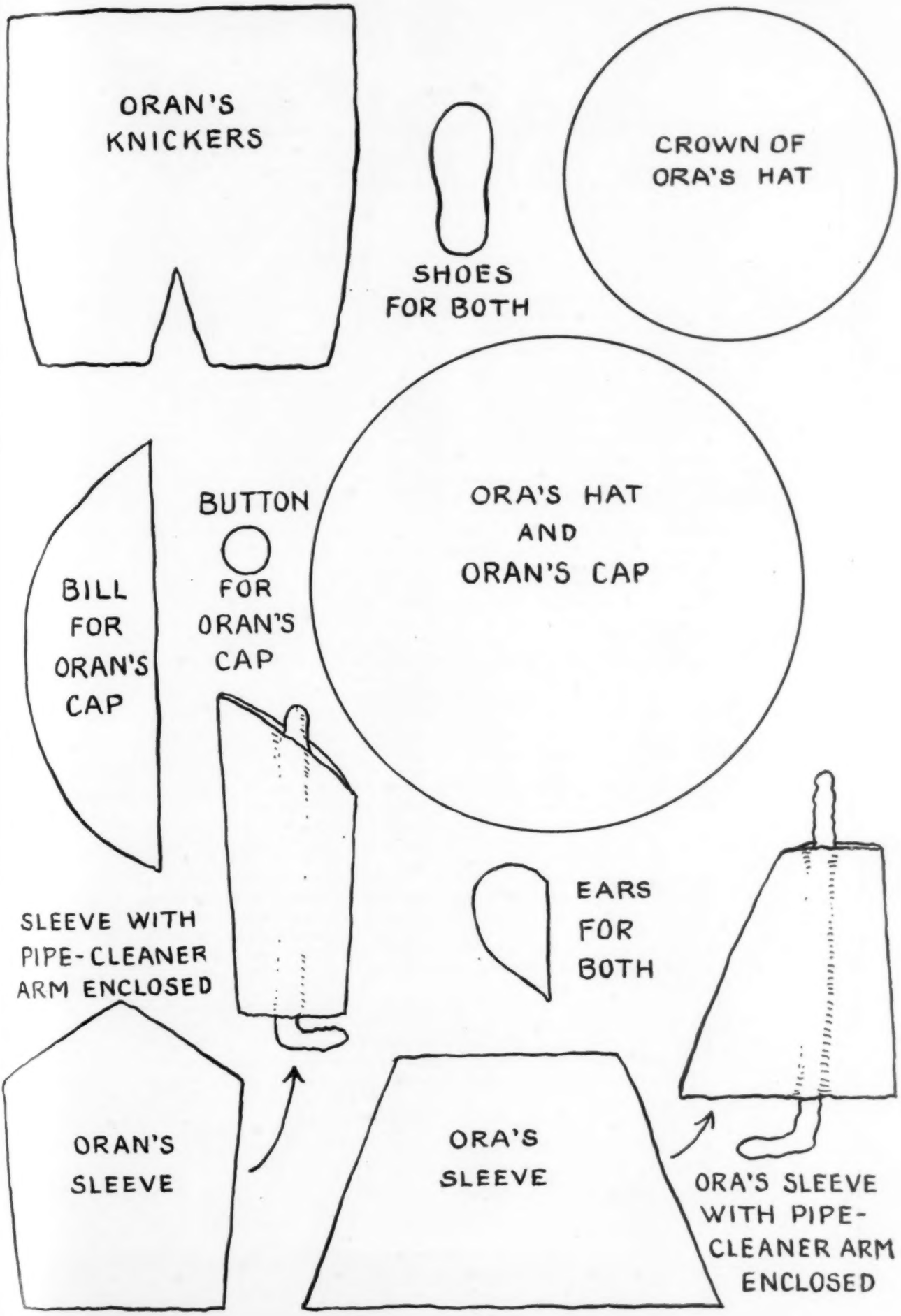
Ora's skirt, a straight piece of orange crêpe paper 9 inches long and 2 inches wide, is gathered and pasted to the under side of the container. A green sash tops her tiny skirt. Full sleeves of orange paper trimmed in bands of green enclose pipe cleaners which are pasted in place to form the arms and hands.

Oran's knickers, cut from orange paper and trimmed with bands of green, are pasted to the bottom of the container. He wears a white crêpe paper collar, a green tie and a green belt. His pipe cleaner arms and hands are enclosed in orange paper sleeves trimmed with green.

Both twins have shoes cut from black construction paper which are pasted on the pipe cleaners that form their legs and feet.

Ora's hat and Oran's cap are both circles of orange crêpe paper. The hat has a crown of green, and the cap has a bill and button of green. The handles of the containers are arranged to form ties for Ora's hat and a band on Oran's cap.

The hats and caps are pasted to the front parts of the heads only. They are left loose at the back so that the containers can be easily opened and filled. When the contents are ready to be eaten, the containers can again be opened without removal of the hats or caps.


ORAN'S KNICKERS
SHOES FOR BOTH
CROWN OF ORA'S HAT
ORA'S HAT AND ORAN'S CAP
BUTTON FOR ORAN'S CAP
BILL FOR ORAN'S CAP
SLEEVE WITH PIPE-CLEANER ARM ENCLOSED
EARS FOR BOTH
ORAN'S SLEEVE
ORA'S SLEEVE
ORA'S SLEEVE WITH PIPE-CLEANER ARM ENCLOSED

PREFACE

THIS book by Dr. Reiss and Mrs. Baruch is written for our children, but this preface is addressed to fellow parents, teachers, school boards, superintendents of education, and faculties of normal schools.

The teaching of health in our elementary schools and high schools is still an unsolved problem; but parents and teachers as well as physicians are gradually recognizing that it is a problem of the first order. This is a cheerful sign. Health teaching in our public schools has to date largely been an endeavor to establish correct health habits in our children, without furnishing the necessary facts that would permit the child to understand or rationalize such habits. In other words, the teaching of health has been on the same basis as the teaching of social mores: do this and don't do that. That such teaching of health is largely futile appears to be shown by the appalling ignorance in essentials of health in a population capable in the three R's. The method of teaching health by example and dictation is, of course, necessary in the home in the earliest years of child life. However, we now have a body of proved information in physiology, anatomy, nutrition, bacteriology, immunity, causation of disease, and the like that puts health principles and the teaching of these principles on an entirely different basis from that of the changing social mores. The problem before our schools is how to bring in such instruction in the most effective way and how to fit it into our present school curriculum. The welfare of society seems to demand an objective teaching of health in our public schools as well organized and as continuous throughout the school years as the teaching of the three R's. This cannot be left to the teachers of other subjects or even to the teachers of physical education, as they are trained at present. Even with able teachers well trained in physiology and hygiene, it cannot be accomplished in the few high school weeks, required by law in some states, for the teaching of personal or public hygiene, the action of alcohol and narcotics on the human body, precautions against infection, and the tooth-brush drill.

There is reason to pause and wonder when we realize that even in our best high schools we have teachers especially trained for, and in many cases giving their whole time to, such subjects as Latin, German, French or higher mathematics, but almost never a teacher especially trained in and giving his or her whole time to the teaching of health; yet from the point of view of the future citizen and society as a whole, this subject seems more important than any of the others.

The present work is a noteworthy attempt to put the elementary facts of anatomy, physiology and health in a language intelligible to the youngest child in the grades. It is a credit to the authors in the matter of clarity and in freedom from fads and propaganda, blemishes that obscure so much of present-day health teaching in our schools. But the printed word itself, however skilfully presented, is insufficient. The book must be supplemented by illustrative material and examples at all stages of the teaching. The teacher must know a great deal more about the human body in health and disease than it is possible to impart effectively to the child.

That the senior author of this A B C of health is a physician is a sign of the growing recognition by the medical profession of its responsibilities toward the healthy man, woman and child. The teaching of health in our schools must be done by the school teacher, preferably the teacher of biology; but in the selection of content and illustrative material, and in the elimination of fads and follies the doctor can be and will be of invaluable aid to the educator

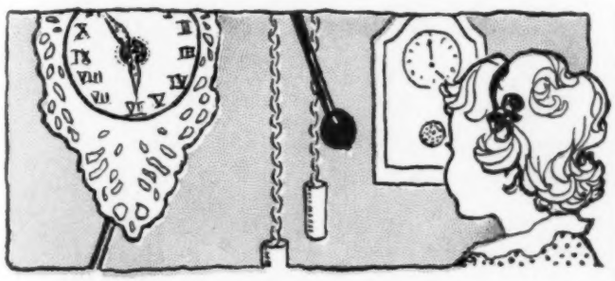
A. J. CARLSON.

University of Chicago,
March 1, 1933.

I Want to Know

A FIRST PHYSIOLOGY

By Oscar Reiss
and
Dorothy Walter Baruch



"I want to know how clocks work," said Jean.

"I want to know how airplanes work," said John.

"I want to know how I work," said Jerry.

And so this story was written.

It doesn't tell how clocks are made or about the parts that help them go.

It doesn't tell how airplanes are made or about the parts that help them go.

But it does tell how people are made and about the parts that help them jump and run and swing on swings, and hammer with hammers, and paint with brushes, and do this and that and everything that you and other people like to do.

Chapter I

GOING FROM THE OUTSIDE IN

HAVE you ever had one of those wooden dolls that has smaller and smaller wooden dolls nested inside of it? You know the kind—you open the first doll and find a smaller one fitted inside, and you open that one and find a smaller one again, and inside of that a still smaller one. Perhaps the outside one wears a red painted dress, the next one, a blue dress, and the next, green.

If you could open yourself in the same way, you would not find red and blue and green layers, but you would find many different layers of another sort as you went from the outside in.

"I can see my outside layer," said Jerry, "when I stand in front of a mirror, if I'm not wearing any clothes."

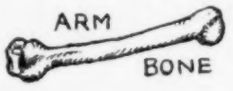
So can you see your outside layer by standing in front of a mirror. It is made of skin and hair and nails.

Suppose you were to peel off this skin layer. You would find an uneven layer of fat underneath, more in some places than in others. You know how fat looks; you've often seen it on meat.

Then, were you to go farther in by peeling off the layers of fat, you would next find a layer of muscles. You would look like this:

You would see the bunchy strands of muscles that stretch up and down and every which way all over you, each separate muscle wrapped in its own thin covering or sheath.

And then, if you were to peel off the muscle layer all around, you would find bones here and there in special places, hard white bones like your teeth. They would look like this:



And then, having unpeeled all these layers, you would find a great many different organs lying inside under your chest and abdomen. In your chest you would find principally the heart, which you can feel beating there, and

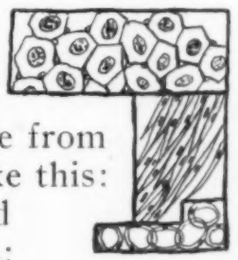
the lungs, which help you to breathe. In your abdomen you would find, for instance, the parts of you, such as your stomach and liver and intestines, that help take care of the food you eat. And you would find inside of you other parts that help you work.

Naturally, you really cannot take yourself to pieces this way. If you were even to begin pulling off the outside layer of skin, still another kind of inside part of you, your nerves, would make you cry, "Ouch, ouch" and you would stop immediately.

But anyway, there you are, with many, many parts to you, more parts than a clock has, more parts than an engine, more parts even than an airplane.

Each one of these parts in turn consists of many tiny parts. Each tiny part is called a cell. These cells are so tiny that you would need a strong magnifying glass or a microscope to see them.

Were you to look at a bit of skin from the top of your hand under the microscope, you would see cells that look like this:



Were you then to look at a piece of muscle from your arm, you would see cells that look like this:

Were you to look at a bit of fat, you would see different cells, some of them like this:

But then it isn't surprising that skin, for instance, is made of cells different from those contained in fat for, certainly, skin and fat do not look a bit alike.

When a large number of cells are bunched together, they make up the materials out of which the various parts of the body are formed. These materials are called tissues. A great many muscle cells bunched together form the muscle tissue out of which muscles are made. Many, many bone cells together form bone tissue. John wanted to know whether his black puppy was made of many different cells too. And Jean wanted to know whether her canary bird was. Jerry laughed and said he knew they were.

So there you are with the many tiny cells put together to make up many different parts, which in turn, make up the whole person. The different parts help you when you eat, when you sleep and when you dance. They help you grow. They help you live.

(To be continued)

SCHOOL AND HEALTH

A Department Conducted by J. MACE ANDRESS, Ph.D.

67 Clyde Street, Newtonville, Mass.

Projects in "Teaching Health" Originated By Southern Illinois Normal University

EVER since the School and Health Department of HYGEIA was inaugurated five years ago, the health education departments and health classes of teacher-training institutions have given it cordial support. In this number of HYGEIA, Miss Florence Denny, an instructor in health education at the Southern Illinois Normal University, offers a number of contributions for the columns on "Teaching Health."

The papers were prepared by her students with the idea of offering them to HYGEIA for publication. In a letter she describes what happened as follows:

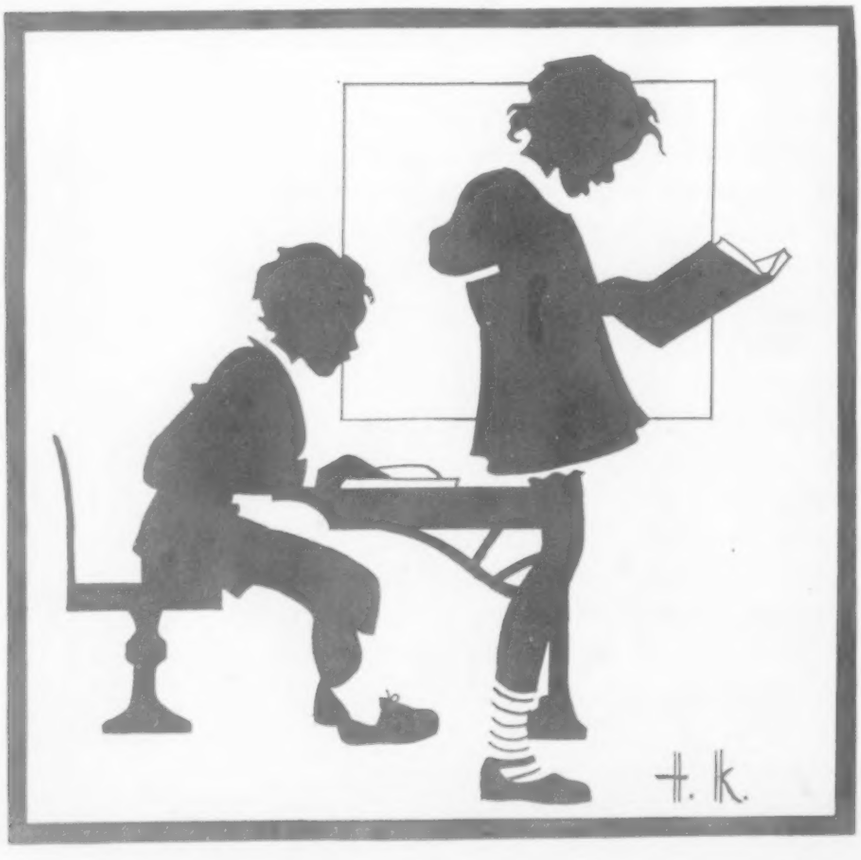
"Our course in Health Education is a required subject given to college sophomores in a twelve week period. The course is divided into three major parts: personal hygiene, sanitation and the teaching of health.

"After completion of the personal hygiene part, I asked my students concerning their teaching experience. I found that some had taught, some had had practice teaching and some had not taught and had not had practice teaching. I asked if they had ever written for publication, and I found that they had not done so. After some discussion they decided that they would like to try to write articles for your department, using: (1) teaching material that they had actually used; (2) reports on material that some one else had actually used successfully or (3) suggestions of their own on good health teaching.

"For the next two weeks I tried to develop in them a critical attitude toward health material and health teaching. In doing this I used 'Psychology for Students of Education' by Arthur Gates, 'The Laws of Health and How To Teach Them' by Winslow and Williamson, 'Principles of Health Education' by Turner, many pamphlets and much mimeographed material, secured at Teachers College, N. Y., last summer, such as 'Criteria for Evaluating Units.' After the two weeks' study they spent some time in trying to decide what to write, which in many cases took longer than the actual writing of the article.

"The project was valuable in many ways. Because of the conferences with the students concerning these papers I became better acquainted with them. We had valuable cooperation from principals, teachers in service, critic teachers, practice teachers, staff members of the state department of public health and the English department of the college."

The articles which follow under the caption "Teaching Health" are only a few of those selected from the number sent. They are varied according to subjects and the grades of instruction.



TEACHING HEALTH

(In this column will be published each month concrete examples of good health teaching. Teachers are invited to send in contributions not exceeding 600 words and preferably less to the editor of this department. Illustrations of the actual work of children will be welcomed. Contributions accepted will be paid for but no manuscripts will be returned.)

LET US GO TO "THE FOOT CARNIVAL"

ARE PEOPLE becoming more or less "foot conscious"? The importance of feet in relation to appearance, posture and, most of all, to comfort cannot be stressed too greatly. Before reaching high school age, girls scarcely ever abuse the feet. On entering high school, however, they are more or less inclined to wear the dainty, slim, high heeled shoes.

The girls of the physical education classes, realizing this fact, planned a "foot week" for all girls of the high school. A "Foot Carnival" was to be the outstanding fea-

ture of the project. Posters were made and distributed to various rooms of the school, advertising the event. In addition, a write-up appeared in the weekly school paper. Tracks, toeing forward in the correct walking position, led from the dressing room up to the gymnasium. The object was to have the girls walk in the tracks in order to attain the correct walking position of the feet.

To arouse interest in the foot week among the girls not taking physical exercise, an interesting program was planned. At the close of the program, a pair of shoes was to be given away. As the girls entered the gymnasium, they were given tickets with numbers on them. A drawing of a foot had been made on each ticket. A play written by the girls, entitled "Freda's Foot Fixery," was presented. "Freda's Foot Fixery" was a foot beautifying parlor in the year 1955. Many persons came for the cure of foot diseases, bunions, corns, callouses and the like. "Pedifumes" and "pedisages" were given; toe nails were painted different colors to match the frocks. The operator gave advice and exercises for broken-down transversal and longitudinal arches. At the end of the program a number was drawn, and the girl holding the lucky number received a beautiful pair of doll shoes.

The "Carnival" consisted of a "freak show," displaying shoes with run-over heels, narrow toes, high heels, and other ill-shaped shoes. In another corner a booth was arranged designated as Sole Reading. After the person who wanted her "sole" read had removed her shoe, a pedograph was made on a sheet of paper, which also showed pictures of how the foot should look and how it should not look. The "sole" reader gave definite instructions for correction of flat feet, weak feet, arch strains, and other pedal ailments.

The local shoe company cooperated with the teacher by furnishing an exclusive line of shoes, leather, lasts, samples of the various parts that go to make up a shoe, and a pedograph machine.

During the time the girls were dressed for the physical education classes, slips were put in their shoes which designated the suitability or unsuitability of the shoes they were wearing. Proper shoes contained the following:

Hurrah! Hurrah! We're proud of you!
We see you know your onions.
You've chosen well your shoes for school,
Avoiding aches and bunions.

FREDA HARTLEY.

BUILDING A HEALTH VILLAGE

THE SECOND grade had been studying about food for several months, and the "health village" was planned as a review of the work. It was based on "Timothy Crunchit," a story about a calico bunny who believed in eating the right kind of food. The pupils had had this story read to them, had read part of it themselves and for language work had dramatized parts of it.

After the teacher and the class together had decided to make a "health village," the planning and working out of the project were left almost wholly to the pupils. They decided to have a health garden in which they would plant the foods that they actually ate, not the foods that were good for them. So they brought out the sand table, and the pupils measured off their own garden plot. Then one of the pupils brought a big carrot to plant in her garden. The rest of the class immediately reasoned out that their gardens were too small to have the real things growing in them, so a plan had to be devised for that difficulty. One member suggested that they write the names of their foods on slips of paper and lay them in the garden. Another pupil thought about putting the slips of paper on toothpicks and sticking them in the ground. The class thought that that was a good plan; so they adopted it.

When the pupils were planting their gardens, one little boy had hominy growing in his garden and another had pork. This gave the teacher an excellent chance to explain to the class that these things did not grow in gardens and to tell them where hominy and pork chops came from.

After all the gardens were planted, the pupils decided that they should like to have a bunny in their gardens. Some made their bunnies out of cardboard, and others used cardboard and glued cotton on it. The teacher noticed that each of the rabbits had one ear flopping down. When she remarked about it, the class said, "Why, Timothy had one ear flopping!"

Since they had decided that not all good things to eat grow in gardens, they needed a place to keep other foods. They decided to make their own store, taking the pattern from a cardboard model. Some of the pupils made shelves, according to their own plans, and some made baskets. For cans they pasted together two edges of small pieces of paper, making a cylinder. On these they printed the names of foods which they did not raise in their gardens.

Each person was to make a house out of cardboard to bring to his health village. One pupil said that she was going to have a toothbrush in her bathroom, and all the others thought that they would need one also.

The teacher happened to have some equipment for a toy playground; so, to add interest, she brought some decorative grass and made a recreation park for the toy village.

The pupils thought that their streets ought to be paved. The teacher thought that they would naturally suggest using paper, but one little boy agreed to bring some pebbles for the streets.

The pupils took great pride in the village after it was completed and wished to keep it for a while.

It was a project that developed initiative, leadership, reasoning power and understanding in the pupils. There was excellent correlation of their health study with mathematics because the pupils figured out the size of their gardens and buildings, with reading and language because the project was based on "Timothy Crunchit," and with construction because the pupils made rabbits, houses and a store.

The immediate results were a tremendous interest in their health class and an interest in proper foods.

DOROTHY RIECKENBERG,
Welge, Ill.

PLAY FOR THE PRESCHOOL CHILD

MANY mothers face the problem of getting the small child to play outside alone. Many children are ready and willing to go out to play with other children or to accompany Mother or Daddy on hikes, sleigh rides or fishing trips but will not go outside to play by themselves. If there are other children in the family, the problem is easy, because the little one wants to imitate the older ones. But often when there is only one child, the mother has to give up too much of her own time to staying out with her child to keep him amused, and as a consequence many mothers do not insist that children get enough outdoor play.

There are many ways to appeal to such a child to make him wish to play. He may want to grow up to be big like Daddy or like an older boy he admires. He may desire to imitate Daddy and play hunting, fishing and the like. Often one can appeal to the desire to do grown-up things.

Here is the way in which one mother solved her problem with a small boy who did not have any companions.

In the first place the yard was attractive to a small boy, and it was also safe. There were no flower beds in which he could not be permitted to play, nor were there other prohibitions. This back yard was his kingdom. It contained a small chicken house and sand pile.

When the sand pile failed to lure him outside alone, the mother would hand him a small pail of grain and get him to feed the chickens and turkeys. Of course he would chase these a while before he tired of them.

As he grew older, other animals were added to the back yard. There had always been a faithful dog, but a pup was given the boy for his very own. Then one spring a motherless lamb occupied weeks of his time.

When he was 5, he was permitted to go beyond the safe little back yard to a little pond in the pasture field. There he spent many happy hours fishing like Daddy. The picture shows him at the age of 5 with his first fish.

Of course his mother could overlook the yard and the pasture from her kitchen window, but the child played many hours in the fresh air and sunshine while she went about her household duties.

This is an illustration of the fact that a child may more easily be tempted to play outdoors alone if his parents can provide a space in the yard, however small, which can be called his own and if they will also give him small pets to care for there.

RALPH BEASLEY,
Stonefort, Ill.

LET HISTORY LIVE!

A PUPIL once said to me, "Why don't we study about something alive? I get tired studying about these old dead people." As this class was one in sixth grade ancient history, the pupil did have some right for his complaint.

My problem then was to find a means by which the characters and events in ancient history could be made to live. At last I thought of an idea by which the characters could be made to seem more like living beings, and in addition another subject could be made more interesting. Why not correlate history with health?

I tried to think of a project that would interest all the pupils and give each of them something to do. There are many subjects dealing with health in history which may be illustrated, such as the Roman water supply and sewage disposal, Greek and Roman athletics and games, and living conditions of the Roman working class. There were many great plagues of the Middle Ages. Here one may find a good opportunity for studying the spread of disease, germ theories and public sanitation. One may find many excellent examples of health in the days of the Pilgrims or in colonial Virginia, such as the condition of streets, the food, sewage disposal and water supply.

This is the project as I planned it:

As the pupils study each group of people, such as the Romans and Greeks, they take notes on the health conditions in those times. After the pupils finish each group, they collect their notes from the textbook and outside reading and put them on cards or slips of paper. They then have consultation with the teacher to see whether the notes need correcting. At this conference they choose the notes which they would like best to illustrate by drawing. Drawing keeps the pupils interested, and since they like to construct, the teacher should give them an opportunity to do so. My construction device would be a picture machine. The pictures could be drawn and the machine constructed in a physiology or a history class set aside for this purpose.

The teacher puts on the blackboard the following instructions:

Materials needed

1. Shoe box
2. Strip of wall paper, 4½ inches wide and 5 feet long
3. Two straight round sticks 7 inches long
4. Two sewing-thread spools
5. One box of colored crayons

Instructions

1. The film: Measure wall paper into 4½ inch squares. In the first square, print explanation of the health habit or condition that is to be illustrated. In the next square, draw picture representing the idea. This procedure is repeated until the roll has been completed.

2. The stage: Cut 4½ inch square in the center of the side of the box. Decorate around the square with colored crayons.

3. Machinery: Punch holes large enough for sticks to enter in the top of the box on either side of the stage. Tack ends of reel on each stick and roll until reel is taut between sticks. Place one spool on end of each stick. As the spool is turned, the explanation and picture pass on the stage. This process is repeated until the reel is finished. A period could be set aside occasionally in the history or physiology class to show the completed films.

Besides letting the child know that his subjects are related, this project has many other advantages. History is made into a "living" subject, and it introduces health habits to the pupils by a method which is pleasant to them. Children receive much enjoyment from collecting, drawing and construction. If a subject can be taught so as to give enjoyment without losing any of its original value, why not teach it in that way?

Because of the tendency toward hero worship and toward imitation, the good health habits of our heroes in history will be imitated and carried out enthusiastically by the pupils.

DONALD COLEMAN,
Anna, Ill.

PIGS HELP TO TEACH HYGIENE

THE FOLLOWING plan, which was put into practice in one of the junior high schools in Decatur, proved extremely successful.

A review of the five classes of foods was the first step undertaken. After these were clearly in mind, the relative importance of these foods to the body was considered. Each person in the class made out what he considered to be an ideal diet for himself, and these diets were submitted to the teacher for criticism. Then the class and the teacher reviewed the essentials of a good diet. This period of review occupied only about a week's time, for the pupils were already slightly familiar with the topic, and furthermore the periods were forty-five minutes long.

Actual experimentation was then carried on in a well equipped room which was set aside for that purpose. The class was divided into halves, each half doing a different experiment. Each group was first given two guinea-pigs. The first group fed one of the pigs the tissue-repairing foods, namely, proteins, water and salts, for a period of six weeks, while the other group fed their guinea-pig only carbohydrates and fats, or the energy-supplying foods. Each group was instructed to feed its other pig a diet as nearly perfect as was possible. As a rule the teacher allowed the pupils to use their own judgment concerning the amounts and times of the feedings, only giving a little assistance here and there. The class hour was divided into two periods, one for laboratory work and the other for discussion.

A chart was kept for each guinea-pig. On this chart the student recorded from day to day the pig's weight, his activity and his general appearance. The pig that was fed only carbohydrates and fats, from day to day grew a little fatter, his hair fell out and his eyes became affected. From these facts the pupils decided that protein is essential to healthful living. The guinea-pig that was fed only proteins, water and salts grew listless and thin. He was not receiving any foods from which he could derive energy, and the pupils found out that the body must also have carbohydrates and fats. The pupils tried to account for the fact that the pig which was fed on the tissue-repairing foods was the healthier; and finally they decided that the body has quite a quantity of carbohydrate and fat stored up, and that even after this source is exhausted, the body may live for some time, but that it must have a certain amount of protein from day to day.

All the pupils by this time had become fond of the animals. The teacher decided this would be a good inducement for them to work, so she offered a prize of two guinea-pigs to the person who accomplished the most in the course.

All this time the pupils in each division were feeding their other pig a diet as nearly perfect as they could devise. Each group agreed not to tell the other what they were feeding their guinea-pig, and at the end of the six weeks they were to see which group could have the healthier guinea-pig. The incentive was due to the competition and also to the fact that the losing group had to give a picnic for the winning group. A chart was kept for each guinea-pig, which showed the animal's daily weight and the amount and variety of the foods it had eaten. At the end of the six weeks, the guinea-pig of group I was 1 pound, 5 ounces fatter than that of group II. A study was then made to account for this difference. It was found that the students of group I had fed their pig a larger variety of foods and that their foods were also better selected, for though several foods contain the same vitamins, some are better selected than are others.

In this interesting, practical way the pupil was able to see the importance of the diet and the effect of dietary deficiency and to learn the essential elements of a well balanced diet.

EVA ROBINSON,
Centralia, Ill.

COMBINING MUSIC WITH HEALTH

RESULTS obtained by a music director of a junior high school orchestra or band depend on the surroundings of the players. A cheerful, comfortable atmosphere will naturally encourage the students to play better. With a little effort and foresight on the part of the director, these surroundings may be secured.

If the director will insist on a few fundamentals, an immediate improvement may be noted. Much of the success attained depends on his efforts, and he cannot assign these duties to any one else. When stressing these points, which pertain to health, he should attempt to teach the players without boring them with the too frequent use of the word health.

Following are points that a director can and should consider before and after rehearsals:

1. The room must be properly ventilated and kept at a temperature of about 68 F. Care must be taken to prevent direct drafts which may chill.

2. Drafts blow music off the racks. On the other hand, a warm, stuffy room is often the atmosphere in which an orchestra must rehearse. In such an atmosphere a student feels lazy and cannot think

as fast as in proper surroundings. Neglect of this factor of proper ventilation is probably the worst feature of a rehearsal room.

3. To prevent eyestrain there must be an abundance of light, but none should shine in the eyes of the players. If the day is dark, electric lights should be used. Modern lighting systems serve adequately.

4. Good posture not only improves the appearance of an orchestra but also contributes to the good health of an individual. When the body is in an upright position, yet relaxed, the lungs can be used to much better advantage, and better playing is the result. Good posture discourages laziness and insures better results by better attention. In some indirect way, the director may show the connection between good physical condition and good playing by mentioning the fact that musical artists have to maintain a good physical condition.

5. Wind instruments must be kept clean, inside as well as outside. Germs may breed inside when saliva and dirt collect. Sometimes players blow one another's instruments. This should be discouraged. Communicable diseases may be transmitted readily. When the instructor insists on cleanliness for the sake of the music only, the health problem is generally solved.

6. Lastly, in promoting good mental health, some music that students like to play should be played. The instructor should make the rehearsal hour an enjoyable one and not an hour to be dreaded. He should have a cheerful disposition and practice control of temper. If students are in a good mental state, they play much better music than they do if they are in a troubled or disordered state of mind.

HAROLD GREEN,
Christopher, Ill.

NEW HEALTH BOOKS AND TEACHERS' MATERIALS

THE many teachers who have used the books of that veteran instructor, James Edward Peabody, and his colleague Arthur Ellsworth Hunt will be keenly interested in the revision of "Biology and Human Welfare." [1] Unlike many so-called revisions it has been considerably enlarged and improved. It is interesting in content. The illustrations are unusual, and the exercises and experiments are challenging. It is so well organized that a high school student who masters the text will get not only a broad and practical knowledge of biology but fundamental conceptions of the needs of the human body and the way in which it works. Health teachers will find within the pages of this modern book much material which may be used with profit in their classes.

THIS year at Chicago the achievements in science are being celebrated at the World's Fair. In this celebration, hygiene and medicine play a conspicuous part; yet with all the progress that has been made it is regrettably true that large numbers of people still adhere to superstitions and other unfounded beliefs. Since one of the functions of science is to develop scientific attitudes of mind, it must also seek to offer remedial instruction concerning influential and unfounded beliefs.

The authors of "An Experimental Study of Superstitions and Other Unfounded Beliefs" [2] have sought to accomplish this by a teaching plan that presents factual material which will have a bearing on some of these unfounded beliefs and yet do so without making the pupils especially conscious of this effort. A large part of this bulletin is devoted to problems relating to health. Page references are made to those publications which bear on particular problems. Among the problems bearing on health superstitions are the following: 1. Is a disease a direct punishment because of some particular wrongdoing by the person who has the disease? 2. Can any disease be produced by thinking too much about it? 3. Is fish a brain food?

The investigators believe that one cannot trust to general instruction to clear up unfounded beliefs but that an attack must be made specifically on them. Most of the unscientific beliefs seem to be due to lack of information. It was found that these attacks on specific superstitions resulted in a distinct gain in desired responses.

This study merits the careful consideration of every teacher of health and science.

THE rapidly changing conceptions in education are a challenge to those who wish to construct the best kind of curriculum. It is desirable from time to time to know what is taking place in a system of schools and then in the light of carefully planned criteria to reconstruct curriculums. In this scholarly work, "Methods and Techniques Used in Surveying Health and Physical Education in City Schools," [3] Dr. Davis finds that surveying in health and physical education is handicapped by the lack of accepted standards and that few surveyors in this field have made surveys in commendable fashion. All teachers engaged in health instruction will be interested in the questionnaire forms found in the appendix.

TEACHERS who are interested in a health activity program will study with care the activities described in "Health—How It Is Lived and Taught in Schools in Onondaga County." [4] The projects were developed by the classroom teachers of the village schools of Onondaga County, N. Y. The activities are carefully organized according to grades. The following list of projects for the second grade will give a good idea of the content of this publication: a good teeth project; a Dutch health activity; a vegetable garden; a breakfast party; how to develop health and happiness in our room.

THE ROMANCE of salt goes back to the dawn of history. It plays a part in the loves, hates and lives of the human race. The superstitions and proverbs about salt are numerous, and it is related to the customs of all peoples. Plato spoke of salt as a substance dear to the gods, and Homer called it divine. The Greeks and Romans used it in their sacrifices; and if it was spilt, it was a bad omen. The superstition that spilling salt is unlucky may be traced back to these ancient ideas.

The general reader will find "Salt: Its Romantic History, Its Refining and Its Many Uses" [5] a beautifully illustrated and fascinating booklet, and teachers of health may use it effectively in hygiene classes.

THE NEED of health instruction in the first grade is recognized in "Health Stories, Book 1" [6] an attractive reader for the second half of the first grade. The illustrations and the content conform to the standards of a good reader. It is unfortunate, especially in a first grade reader, that it should be somewhat "preachy" about health and have whole pages devoted to the enumeration of health rules. However, it is a worthy contribution to the literature on health education and should be welcomed by first grade teachers.

1. By Peabody, James Edward; and Hunt, Arthur Ellsworth. Price, $1.60. Pp. 658. New York: The Macmillan Company, 1933.

2. By Caldwell, Otis W., and Lundeen, Gerhard E. Price, $1.25. Pp. 138. New York: Bureau of Publications, Teachers College, Columbia University, 1932.

3. By Davis, Elwood Craig. Price, $2. Pp. 169. Bureau of Publications, Teachers College, Columbia University, 1932.

4. Pp. 46. Syracuse, N. Y.: Health Education Department, Onondaga Health Association, 1932.

5. Pp. 88. New York: Worcester Salt Company, 1933.

6. By Towse, Anna B., and Gray, William S. Price, 60 cents. Pp. 144. Chicago: Scott, Forseman & Co., 1933.

NEW BOOKS ON HEALTH

SOCIAL PLANNING AND ADULT EDUCATION

By John W. Herring. Cloth. Price, $1.25. Pp. 138. New York: The Macmillan Company, 1933.

THIS BOOK describes the development of a plan of social health in which facilities for recreation, adult education and community improvement were coordinated on a countywide basis. Chester County, Pa., is the scene of the experiment, which was made possible in part by a grant from the Carnegie Foundation through the Association for Adult Education, the organization through which the author came to the direction of the work. The book leaves in the mind of the reader a question, which the author faces quite frankly, as to whether it is really worth while to try to educate adults any further than they will go of their own accord. A number of excellent projects initiated by the Chester County commissions on health, recreation, social work and library, which constitute the working units of the plan, met with indifferent public response.

Especially disheartening is the record of willingness to accept the benefits of developed projects but apathy toward opportunities to support them either financially or by personal interest and labor. On the other hand, even the depression has not prevented the council from getting funds to carry on, to establish a county center and to develop good work along each of its four major lines, especially library and health.

It is, indeed, interesting to note that the Chester County Medical Society sponsored the health unit for the county, procuring the appropriation for it from the county board and directing the policy of this health unit.

The most interesting feature of the report is the discussion of the philosophy of the countywide plan for development of activities looking toward public welfare. The author's blunt repudiation of the principle of separate specialized health movements, each backed by a national organization with its own limited interests to serve, is refreshing. Too many lop-sided local programs have been developed because a high-powered salesman got there first and took more than his fair share of the community's resources for his own organization's limited though usually commendable purposes. Intelligent local planning ought to obviate some of this unfortunate tendency.

Health and social workers ought to read this report and then consider carefully what they can learn from it regarding not only what to do but what not to do. The Chester County plan seems to be far ahead of the people of the community itself, except for a small nucleus. The nucleus, however, is growing. Perhaps the general population may in time become more appreciative. If the leaders of the planning movement are wise and do not move too fast, they may yet have the reward of seeing their pioneering appreciated. In the meantime, it contains useful lessons for workers elsewhere.

W. W. BAUER, M.D.

NURSING GUIDE

By Louis W. Sauer. Third edition. Price, $2. Pp. 208. St. Louis: C. V. Mosby Company, 1933.

THIS IS the third edition of a book on infant care which has been quite popular. The preparation and distribution of books of this sort have been a factor in reducing the high infant mortality rate.

At no time of life is proper hygiene and feeding so important as during infancy. Yet, though many facts concerning infant feeding, the prevention of contagious diseases and other childhood disorders have been discovered, they are not as widely applied as they should be. It is only through the distribution of this type of book that these facts can be brought home to large groups of mothers.

The first chapter of this book, which concerns the new-born baby and his care, includes a discussion of the clothing, food and such minor disorders as may arise. The remaining chapters are concerned with prematurity, breast and artificial feeding, problems of later childhood, the sick child, common ailments and the contagious diseases.

Any mother will find this book of great aid in caring for her children.

WILLIAM I. FISHBEIN, M.D.

ADJUSTMENT OF BEHAVIOR PROBLEMS OF SCHOOL CHILDREN

By Elise H. Martens and Helen Russ. U. S. Office of Education. Bulletin No. 18. Paper. Price, 10 cents. Pp. 78. Washington, D. C.: Department of the Interior, 1932.

DR. MARTENS, a specialist in education of exceptional children, and Mrs. Russ, a visiting counselor of the public schools of Berkeley, Calif., have described a two-year experimental observation of problem children in the public schools of Berkeley. They describe the organization of a community coordinating council including the schools, the health department, the social service agencies, the police department and the recreational department. The medical profession is conspicuous by its absence from this council, for the public health department may fairly be regarded as not representative of family medical advisers, who should not be overlooked.

The authors approach their task with a clear recognition of the difficulties which they face in the attempt to reduce variable and changeable human values and environmental influences to a statistical basis for analysis. They have made a serious and apparently successful effort to measure the progress of their group of problem children to whom clinical guidance methods have been applied, against two control groups, one of problem children not getting such guidance and one of nonproblem children. They have interpreted their results with commendable restraint, fully recognizing the limitations of conclusions drawn from a study of a few more than 100 children for only two years.

They conclude that conscientious and intelligent cooperative plans for child guidance in a community will give results which are definitely worth while, as shown by their statistics, according to which the problem group with guidance improved definitely as compared with both the control groups. They express the hope that other communities will follow the Berkeley plan. They recognize that costs may be a factor in establishing such guidance clinics, but unfortunately they do not discuss the costs of the project.

W. W. B.

QUESTIONS AND ANSWERS

Poison Ivy—Poison Oak

To the Editor:—Please inform me as to the latest efficient methods in the treatment of poison ivy or poison oak. We have used many of the "patent medicines" but to no avail. It seems they all resort to a local treatment consisting of the use of a lotion containing powdered zinc oxide in suspension. Surely there is some local application which may prove helpful in relieving this irritation.

R. E. F., Pennsylvania.

Answer.—Local applications in poison ivy or poison oak inflammations are frequently unsatisfactory. It is possible in some instances to create an immunity against further poisoning by the injection of an immunizing preparation. Whenever exposure to poison ivy or oak may have taken place, it is wise to use a simple precaution as soon as possible. This consists in soaping the whole body with a heavy lather of any good soap, rinsing, and repeating the process. If the oil, which is the irritating element, can be washed away by this means in time, irritation will be prevented or minimized.

Cottage Cheese

To the Editor:—Please inform me as to the value of cottage cheese as a food. I understand that in nutritive value it is equal, pound for pound, to lean meat. Is this true? How does 1 pound of cottage cheese compare with 1 quart of milk? Do children and adults alike digest it easily?

R. P. J., Iowa.

Answer.—In reply to your inquiry about the nutritional value of cottage cheese as a food in comparison with lean meat, the following is quoted from a recent book on diet and nutrition by Carter, Mason and Howe:

"Cottage cheese, as usually made, contains 75 per cent of water, 20.9 per cent of protein, 1 per cent of fat, and 4.3 per cent of carbohydrate. It has nutritional or caloric value of 112 calories per 100 grams.

"Porter-house steak has 60 per cent of water, 21.9 per cent of protein, 20.4 per cent of fat, and no carbohydrate, but contains 280 calories per 100 grams, considerably more than twice as much nutritional value as cottage cheese."

Other varieties of cheese, known as full cream, are much richer, containing only 34.2 per cent of water, 25.9 per cent of protein, 33.7 per cent of fat and 2.4 per cent of carbohydrate, with a total food value of 430 calories per hundred grams.

The food value of milk depends largely on the amount of fat it contains. As purchased, it contains from 3.5 to 4 per cent of fat and has a value of approximately 650 calories to the quart.

Cottage cheese is an excellent food for both adults and children, if they are in normal condition. The solid content is almost pure protein, containing little fat or carbohydrate. It is easily digested and contains the protein in the form of easily assimilable casein.

Sinus Trouble and the X-Rays

To the Editor:—Frequent dizzy spells lead me to believe that I have some sinus ailment. An urologist who has been treating me for infected prostate gland says the dizziness is not due to heart, blood pressure or kidneys and has advised a thorough physical examination. First, I should like to have an x-ray examination of the head. To whom should I go?

C. B. J., New York.

Answer.—The proposed plan, according to which the x-rays precede the physical examination, is illogical. The x-rays are merely an adjunct to diagnosis. The physical examination should come first, and laboratory methods, such as x-ray examinations, should follow.

X-ray examinations of the head may be had at any first class hospital and in the offices of a great many physicians. The secretary of the county medical society is in position to furnish the names of hospitals and physicians in given localities.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Blood Pressure

To the Editor:—What is the normal blood pressure for a woman, aged 28? What is the normal hemoglobin percentage? What do acid and phosphates in the urine indicate? What does bile in the urine indicate? Does pain in the gallbladder, usually sharp but sometimes grinding, indicate gallstones? The patient also has constipation, indigestion and a yellow skin. Would poor circulation cause puffs under the eyes and on the ankles? The patient has a heart murmur; also albumin in the urine at times. There are long intervals during which there is no albumin, but the puffiness remains. It does not go down overnight. The swelling is always in the ankles but is not always present under the eyes. Would there be pus cells in the sputum on examination under any condition other than tuberculosis?

F. E., Pennsylvania.

Answer.—Normal blood pressure for a woman, aged 28, may range from 135 to 100 for systolic pressure, and from 100 to about 60 for the diastolic. This is just a general statement and there might be considerable variation from these figures without indicating serious trouble.

The normal hemoglobin percentage for a woman by the tests usually applied is from 75 to 80.

Acids and phosphates in the urine do not necessarily mean anything; for they are found also in normal urine. A great variety of painful symptoms are described in connection with gallbladder trouble. Bile in the urine does not of necessity mean anything serious. When it is present it indicates that there is some trouble with the gallbladder.

"Poor circulation" is an indefinite and meaningless term. Puffiness of the eyelids and ankles is often a result of kidney trouble, with albumin in the urine. Pus cells may occur in the sputum when there is present about the mouth a condition attended with the formation of pus.

Used Daily *by leading Specialists at the* GRACE HOSPITAL *New Haven*

Use it in Your Own Home

"Hexylresorcinol Solution S. T. 37 is used regularly for its great germ-destroying power combined with safety."—Grace Hospital, New Haven, Conn.

THE Grace Hospital, in New Haven, Conn., justly priding itself on its splendid, modern equipment and unrivaled medical care, is still another of the great hospitals regularly using Hexylresorcinol Solution S. T. 37 (1:1000).

This hospital says, "So powerful is this antiseptic that it is used here daily for the cleansing of wounds and in operations. This efficient antiseptic spreads more rapidly and more deeply than many other antiseptics into the crevices of wound tissue."

Hexylresorcinol Solution S. T. 37 is stronger than carbolic acid in any usable solution—yet so safe, you can use it freely in your own home. Pour it at once into scratches, cuts, open wounds. In case of serious injury, consult your physician. Hexylresorcinol Solution S. T. 37 does not sting or burn. Teach your children to use it freely. The Seal of the Council on Pharmacy and Chemistry of the American Medical Association should serve as an indication of its trustworthiness.

Hexylresorcinol Solution S. T. 37 is economical. The 50¢ bottle is now a whole ⅔ bigger than before. And you get the large size for only $1.00 instead of $1.25. Prices are now the same in both the United States and Canada. Buy a bottle today!

HEXYLRESORCINOL SOLUTION S. T. 37

Made by **SHARP & DOHME**

The majority of cancers –in early stages– can be successfully and completely removed or destroyed by Surgery, X-rays or Radium

SPREAD the encouraging findings about cancer. Too many people can see only the dark side of cancer.

There is a widespread and mistaken belief that cancer is incurable and that nothing can be done to stop its destructive progress. Such belief leads people, who have reason to suspect its presence, to delay having an examination—until it is too late.

Another reason why cancer often gains headway is because in its first stages it is usually painless and therefore disregarded.

Wounds that refuse to heal—warts, moles, scars and birthmarks that change in size or color or become scaly—abnormal lumps or strange growths under the skin in the breast and elsewhere—unnatural discharges—all call for immediate action.

Jagged or broken teeth should be smoothed off or removed. Continued irritation of the tongue or any other part of the body is often the beginning of cancer. When any one of the first signs of cancer is discovered, there is no time to lose. If an early discovery is made, the probabilities are that surgery, X-rays, or radium can effect complete recovery.

Cancer is neither contagious nor hereditary, although the history of the disease shows that certain types of individuals and certain families are more susceptible to cancer than others.

Some forms of cancer are obscure and can be detected only by a physician who has had long experience with the disease, but many of the ordinary first symptoms would almost surely be discovered in a thorough periodic health examination.

Tell people that cancer in its first stages can usually be entirely removed or totally destroyed. Help to save lives.

METROPOLITAN LIFE INSURANCE COMPANY
FREDERICK H. ECKER, PRESIDENT ONE MADISON AVE., NEW YORK, N.Y.
© 1933 M. L. I. CO

Milk Diet

To the Editor:—Are there any possible benefits which may be derived from going on a strict milk diet for six weeks if one's stomach is not abnormal? Does milk serve as a tonic in any way? Does orange juice prevent constipation if the milk diet tends to cause it? Are there liable to be any ill effects arising from this diet?

R. O. W., Nevada.

Answer.—No benefits may be derived from going on a strict milk diet for six weeks if the stomach is not abnormal. In the first place, there is no reason for doing so. A milk diet does not act as a tonic in any way. It is an unbalanced diet, because milk is not a complete food, though it does come as near to being a complete food as any natural substance. The so-called milk diet has been heavily exploited by certain faddists and cults, according to whom milk diets will cure anything from baldness to syphilis. This is ridiculous.

An exclusive milk diet, unless orange juice is added, will tend to promote constipation and will be deficient in vitamin C. Moreover, the adult will find it exceedingly difficult to drink adequate amounts of milk to keep him normally nourished.

An adult needs a sensible diet, including any and all ordinary, wholesome foodstuffs which appeal to him; among these foods may be milk, meat, vegetables, fruits, nuts and any other wholesome food.

It is difficult to understand why diet fads with absolutely no scientific basis should make such a strong appeal. If one is in good health, one should be impressed by the good sense of remaining so, without embarking on needless and possibly harmful experiments.

Inflammation of the Middle Ear

To the Editor:—If a patient with acute otitis media underwent operation early enough, would the development of meningitis be prevented?

B. E. O. G., New Jersey.

Answer.—In a case of acute otitis media (inflammation of the middle ear), if drainage is not provided for the pus, it may invade the spongy tissue in the mastoid process behind the ear and thence penetrate the bone; or it may destroy the bony walls of the inner ear itself and thus reach the brain, producing meningitis. Prompt surgical drainage of ear abscess usually prevents this complication.

"20 *White Horses* upon a *Red Hill*"

THAT'S the way Mother Goose describes baby teeth. And to baby's mother they should be priceless possessions deserving constant attention. Even though they live less than a decade, their condition influences the 32 permanent teeth that follow.

Both sets must be kept healthy. Baby teeth as well as the permanent ones should be examined by the dentist every few months to be sure that no decay is casting its ugly shadow . . . that no incipient disease is gaining foothold.

X-rays make the examinations thorough. Today's dentist need not depend solely upon his pick and mirror to discover disorders. He can "see" root conditions. He can detect the very beginning of infections which so often cause serious illness. His *Bite-Wing* x-ray examination shows the start of decay on surfaces that his instruments cannot reach.

Less Discomfort and Expense

With this information and modern methods of treatment, the dentist is able to keep teeth at their best—with the least discomfort and minimum expense. You should go to your dentist regularly . . . and take the children. Good teeth help maintain health.

HAVE AN ANNUAL HEALTH AND X-RAY EXAMINATION

• *X-rays play important parts in maintaining healthy teeth. The interesting booklet, "How to Prevent Toothache," tells about them. Mail the coupon for your free copy.*

EASTMAN KODAK COMPANY, *Medical Division,*
359 State Street, Rochester, N. Y.

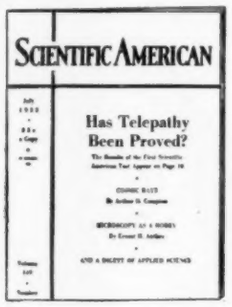
Gentlemen: Please send me the free booklet, "How to Prevent Toothache."

Name _____

No. & St. _____ City & State _____

Science News Is Popular

but you can only be sure of its authenticity and accuracy by reading



SCIENTIFIC AMERICAN

A monthly survey of the progress of Science, Industry, and Engineering. Authentic scientific news, written so you can understand it, in the semi-popular style, originated by Scientific American in 1845, that has made scientific news as fascinating and popular as fiction.

Special attention is constantly given to:

PURE SCIENCE:	**Understanding the cosmos from the smallest atom to the largest star.**
ENGINEERING:	**Significant civil, electrical and mechanical projects and their economic importance.**
INDUSTRY:	**Development of new or improved products and processes.**
AVIATION:	**Progressive development in the conquest of the air. Aerodynamics, speed, safety, and transportation.**
ARCHEOLOGY:	**Outstanding discoveries or acquisitions valued from historical and ethnographical standpoints.**
ASTRONOMY:	**Monthly articles by world's foremost astronomer, Prof. Henry Norris Russell; also a department for Amateur Telescope Makers.**

A general magazine for those who desire to be "informed" on the developments in the active and interesting modern world. Its articles are concise and clear, and are selected with discriminating consideration for the tastes of manufacturers, executives, engineers, lawyers, doctors and others who wish to keep abreast of the times.

Single copies 35c Yearly subscription $4.00

SCIENTIFIC AMERICAN in combination with HYGEIA—Health Magazine, $5.50 postpaid.

SCIENTIFIC AMERICAN PUBLISHING COMPANY
26 West 40th Street, New York, N. Y.

Undulant Fever

To the Editor:—Is there any dependable specific diagnostic test for undulant fever? Is there any effective treatment or cure known for it? Is it a communicable disease like other fevers?

F. G. G., New York.

Answer.—There is a blood test for undulant fever based on the same principles as the Widal test for typhoid. It is usually performed by city or state health department laboratories or by private laboratories. The treatment of undulant fever is what is medically known as symptomatic and consists of rest, relief from pain, nutritious diet and, if necessary, measures to reduce the fever. The course of the disease is long and tedious; there is frequently considerable exhaustion. No specific cure has as yet been found.

Undulant fever is a communicable disease. It is caused by a tiny organism known as Brucella melitensis, which is identical with the organism producing contagious abortion in cattle and pigs. It is transmitted to the human patient either through milk or through contact with persons, though the second does not seem to be an important means of transmission. Pasteurization of milk is a protection against it. Herds can be tested for contagious abortion as they can for tuberculosis; positive reactors can then be eliminated. Herds from which certified milk is produced are so tested, but the procedure is not as general as is the testing of cattle for tuberculosis.

Pneumococcus

To the Editor:—What is the life cycle of pneumococcus meningitis, type IV? Explain the incubation period. Would it be possible for the organism, pneumococcus type IV, to be in the spinal canal for some time before the acute symptoms occurred?

B. E. G., New Jersey.

Answer.—The pneumococcus does not have a life cycle in the same sense as a parasite which goes through different stages. Like other simple bacteria, it divides again and again. The incubation of the disease varies. Meningitis from this organism may usually be expected to be a complication of pneumonia, though this is not invariable. Invasion of the meninges by the organism may be expected to produce symptoms within a few days from the time it occurs, though this may be at any stage of the pneumonic process in the lungs.

Diet

To the Editor:—There is a system of diet in which at given meals differently constituted foods are grouped; that is, at one meal proteins only are eaten and at another meal starches are eaten. I am informed that there is literature to be had on this diet telling how to apply it. Can you give me the name of such a publication and its publisher, or any other source from which I could get information on this diet?

R. E. J., New Jersey.

Answer.—The system of diet mentioned is one of the numerous food fads that are being promulgated as a means of commercializing on the modern interest which intelligent people take concerning their diet.

There is no basis for the theory that foods need to be grouped at given meals according to their composition. There is no evidence that at one meal only proteins and at another only starches should be eaten. As a matter of fact, common everyday foodstuffs contain both proteins and starches in so many instances that to follow such a diet system would be impossible even if it were desirable.

HYGEIA will furnish on request a list of books in which sound principles pertaining to diet and nutrition will be found.

Carbon Arc Lamps

To the Editor:—I have been advised to use a carbon arc lamp to remedy a condition of the blood of a 3½ year old girl. I do not know the exact medical term for this condition, but briefly, she gets black and blue marks on her body at the slightest knock or fall. I understand that an instrument like this, wrongly used, may do more harm than good. What is the opinion of the medical profession?

S. J. G., New York.

Answer.—Probably the condition to which the writer refers is a disturbance of the blood cells which leads to a defect in the blood-clotting power of the child. This is recognized clearly by the medical profession. Carbon arcs have seemed to be of value in some cases of this type and several foreign writers recommend this form of treatment. However, each case must be studied individually. The inquirer is advised to consult a specialist on diseases of the blood who will advise suitable treatment. The use of all such lamps in cases of disease should be under the guidance of a physician.

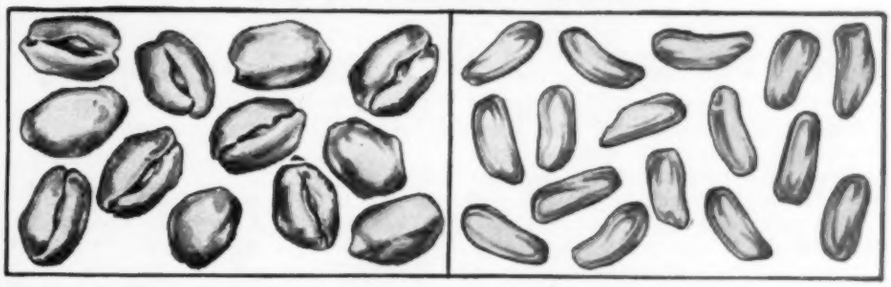
Delicious Breakfasts Shot from Guns

There is nothing else like food shot from guns—never a cereal so delicious.

The wheat or rice is puffed to eight times its size, yet the coats of the grain are unbroken; the shapes are unaltered. You have simply the magnified grain.

The result is a food that is crisp and inviting. A most wholesome and delicious cereal food.

Exact Size of Grain After Being Puffed



Puffed Wheat, 10c Puffed Rice, 15c

This is the curious process:

The whole grain is put into sealed bronze guns. Then those guns are revolved, for forty minutes, in a heat of 550 degrees.

The moisture in the grain turns to steam, in that heat, and attains a terrific pressure.

Then the guns are fired. Instantly the steam explodes every starch granule.

Thus the kernel of grain is expanded eight times. Yet it remains an unbroken berry, either of wheat or rice.

Exploded by Steam

These foods are the invention of Prof. A. P. Anderson, formerly of Columbia University.

His object was to break open the millions of starch granules. That is the object of all cooking. For starch that is broken digests more quickly.

But other methods scarcely do this. Many of the granules remain unaffected. Under this method, every starch granule is expanded. Thus the digestive juices can act more quickly.

Please order one package of Puffed Grains—do it today—just to hear what the children say.

Made only by The Quaker Oats Company

"NOW WHEN I WENT TO SCHOOL"

(Continued from page 783)

will the first be a girl or a boy?" Again came the voice of the learned one, "I have consulted the stars and am unable to answer your question." Perhaps she neglected to give her husband's birth date. The next day I asked a class of forty-six pupils about the program. Thirty of the pupils had access to radios, and twenty-two had listened to the program.

A few days later I attended a missionary program and heard a speaker plead for funds to send some one to "enlighten the poor, ignorant, superstitious heathen of Africa." I could not but wonder what some of these women would have thought about star consultation on the probability of motherhood.

What then is to be the plan of the future?

It is of prime importance that the teacher should follow the motto of the great Socrates, "Know thyself." She should be sure there is no superstition in her make-up.

The teacher must not hesitate to explode a superstition because of fear of opposition of the parents. No teacher would uphold a parent in teaching that 2 plus 2 is 5; yet often superstitious ideas of health are permitted to go unchallenged. The situation may result in a parent-teacher meeting not arranged by the program committee, but that is better than a tragedy caused by superstitions of the Middle Ages. Modern science dictates health procedures.

The source of knowledge is important. It is not within the scope of the ordinary teacher's training to possess expert knowledge on all matters of health. This may not be a credit to the profession, but in too many cases it is true. In school systems employing a competent nurse, the problem is greatly simplified; fortunate indeed is the teacher who can call in a nurse or school physician to help her solve some of her health problems. If the school system has no nurse or physician, the teacher may turn to almost any reputable physician for advice. Fortunately in the ranks of the medical profession there is not only a willingness but a desire to help produce strong healthy children. The improvement in hygienic conditions in schools has been brought about by the medical profession, and the teacher should cooperate in every way.

When the ax begins to fall on government budgets, schools are a convenient target and often get the first stroke. But in cutting expenses, let us hope that our health department will be spared us.

Gauzets

GUARANTEE

protection!

Think what this means in a sanitary napkin!

Gauzets, a new type sanitary napkin, have a hidden safety feature that makes them absolutely *moisture-proof.*

Underneath the fluffy softness of the pad layers is a protecting rubberized layer which moisture cannot get through.

Think what this means! Absolute protection to clothing . . . never again worry, fear, embarrassment.

Gauzets just suit a fastidious woman's requirements in other ways, too. They're right in size and shape; large enough but not too large. They have no bunchy corners to show through clothing.

Their smoothly buffed edges give great wearing comfort. And of course they're easily and quickly disposable.

Try Gauzets *just once*—and you'll solve *this* problem forever.

At all Rexall and Liggett Drug Stores

Gauzets

Made by United Drug Co., Boston, Mass.

ARE THEY READY FOR SCHOOL?

(Continued from page 787)

only be ready but eager to go; it is for the parents to make him so.

Any child entering school for the first time will be under a great mental strain, no matter how well he has been prepared for the first few days. He has to become adjusted and used to sitting still and being quiet. He will naturally miss the freedom of a long day's play. So parents must see that as much time as possible is spent outdoors after school. The child will tire easily at first and will need long hours of restful sleep. Every child under 10 years of age should sleep eleven hours each day. Be sure that the window in the bedroom is open top and bottom to keep the air fresh even in the coldest of weather. Poor ventilation will soon make a child languid and pale. He will need all the air he can get, especially since he will be indoors so much more than he has been.

There are certain health habits that a child should acquire before he is ready for school. If these habits become a routine part of his life before school days begin, half the battle will have been won. The habit of obedience and self control will be the first one he will be called on to use in school. A rebellious, quick-tempered child, who has never learned to control his will, may easily develop into a nervous child and his health may be greatly impaired. It will be most unfortunate for him as well as for the teacher if he has to learn this life lesson after school begins. If this is necessary, his love of school may quickly turn to hatred.

There is the habit, too, of eating whatever food is placed before him. A child grows finicky only if he is indulged in his whims. He should early be taught to eat a variety of food. If this habit is acquired, there will be none of those breakfasts at which sulkiness reigns and food is left untouched, and after which the child starts off for school late and ill tempered, his whole morning spoiled. To make the child ready for school, teach him to eat properly. No day either starts or ends right if meals are unpleasant scenes. For his health's sake a child should start to school and start for bed in a happy frame of mind.

The habit of cleanliness is one without which no child is ready for school. If cleanliness is taught early, it will become a habit and there will be no difficulty when school days start. Cleanliness includes the warm bath to be taken

(Continued on page 853)

ARE THEY READY FOR SCHOOL?

(Continued from page 852)

at least twice a week. Hands are to be washed and dried before eating. Individual towels must be used; it is a dangerous habit to share towels. Teeth must be brushed three times a day and always before retiring. An unclean mouth may cause serious trouble.

Internal cleanliness is a vitally important health habit. By the time your child is ready for school he should have learned to drink four or five glasses of water a day and never to use a cup from which any one else has drunk. Perhaps most important of all is the habit of cleanliness through evacuation. Immediately after breakfast your child should have half an hour to devote to elimination. He should never feel hurried or worried during this time; rather he should be made to understand that this is as important a part of the daily duty as going to school itself. If you find that your child has any difficulty in elimination, add more fruit juices to his diet and give him more water to drink. Do not resort to pills or medicines without the doctor's advice. If regular habits do not correct the condition, consult a physician. On the formation of a proper habit of elimination during childhood depends the health not only during the growing years but throughout life. Give your child the right start in this important matter.

And so to get your child ready for school you will want to have your doctor give him a thorough health examination and you will want to have corrected all defects which may be found, no matter how minor these defects may seem to be. You will want to have the safety scar of smallpox renewed and immunization against diphtheria complete. You will want to cultivate the necessary health habits in your child so that school life may be free from indisposition and worry. You will want to prepare yourself to set the best possible example for the child and to be ready to give him your whole-hearted support in all that is right, for the influences affecting an individual during the formative period of life do much to determine future development and happiness. You will want to cooperate with your child to provide for him all that is needed in order that he may give to the world his best and receive the best in return.

"The world moves forward on the feet of little children," and it is for you, the parents, to guide those little feet!

"ONCE THEY HATED MILK—NOW THEY FIGHT FOR IT"
"It used to be a problem, getting my children to drink milk. But they love it mixed with Cocomalt; it's so delicious!"
BILLY WAS WEAK UNTIL A FEW MONTHS AGO
He ate well but couldn't gain. Cocomalt and milk taken regularly has helped make him husky and strong.
HELPED HER BUILD A FINE STRONG BODY
Betty was once frail. The extra Vitamin D in Cocomalt has done wonders for her physical development.
FOR BABY'S SAKE
"While nursing my baby I drank Cocomalt because it contains Sunshine Vitamin D and helps promote strong bones and teeth."
"A GREAT WAY TO GET BACK MY STRENGTH, NURSE!"
"Home next Friday? That's fine! Cocomalt in milk certainly helped me get back my strength and build me up quickly. It sure is a treat!"
COULDN'T SLEEP NIGHTS
"I realized the value of hot drinks for inducing sleep. I'd take a cup of hot Cocomalt before retiring and would sleep like a top."
Cocomalt is a scientific food concentrate of sucrose, skim milk, selected cocoa, barley malt extract, flavoring and added Sunshine Vitamin D.

How they gain on this *delicious* drink—Cocomalt in milk!

Undernourished children gain a pound a week—and more! Men and women of all ages gain new energy. Convalescents, hard-studying school children, expectant and nursing mothers—*everybody* benefits from this delicious food-drink!

For Cocomalt is *all food*. Prepared according to directions, every glass is equal in food-energy to almost *two glasses* of milk alone! Provides proteins, carbohydrates, minerals (calcium, phosphorus).

And very important, too, Cocomalt is rich in Sunshine Vitamin D. This vitamin helps to convert the calcium and phosphorus into strong bones and sound teeth.

WARNING! Don't be misled into buying substitutes for Cocomalt. Comes in powder form only. It's economical. In ½-lb., 1-lb. and 5-lb. cans—at grocery and drug stores. Or mail coupon (and 10c to cover cost of packing and mailing) for trial can.

Delicious hot or cold

ACCEPTED AMERICAN MEDICAL ASSN.

Cocomalt is accepted by the Committee on Foods of the American Medical Association

R. B. Davis Co., Dept. K-9
Hoboken, N. J.

Please send me a trial-size can of Cocomalt. I am enclosing 10c to cover the cost of packing and mailing.

Name .....

Address ..... State .....

City .....

PROMOTE GROWTH

by giving this table salt to children whose diets are lacking in iodine!

ACCEPTED AMERICAN MEDICAL ASSN. Committee on Foods

FOR years mothers have known that giving children iodized salt protects them from goiter caused by insufficient iodine in the diet.

And now Dr. Percy Stocks of London University has discovered that, by preventing goiter, *iodized salt definitely increases both height and weight!*

Dr. Stocks made his investigations in Switzerland, where iodized salt is widely used. There he found, as also did Hunziker in Germany, that children who receive iodine regularly are superior in growth to those who do not.

If you want *your* children to escape the physical as well as mental backwardness that accompanies goiter, begin to use Morton's Iodized Salt at once! It is neither drug nor medicine, but just a pure white table salt to which a trace of tasteless iodine has been added.

The fact that Morton's Iodized Salt has been accepted by the American Medical Association's Committee on Foods is ample assurance of its reliability. Get it *today* and use it regularly, both on the table and in cooking. And also write Morton Salt Co., Dept. D, Chicago, for leaflet giving the percentage of goiter in your locality.

WHEN IT RAINS IT POURS

10c

PROGRESS IN PREVENTIVE MEDICINE

(Continued from page 831)

rate was always much higher than the case rates in the epidemics. "The meningeal cases are the foam on the dark carrier rate wave; when the latter reaches a certain height (20 per cent) something happens and cases appear; just as when a wave of water reaches a certain height the surface tension cracks, and it becomes a white horse. Conditions other than height of wave may modify the appearance of the foam, but a certain height is essential."

While sporadic cases might appear without the high carrier rate, this always preceded epidemics. It was found that in war camps a carrier rate of from 5 to 10 per cent was usual, one from 10 to 20 per cent was unsatisfactory and had to be watched with suspicion, while a rate of 20 per cent was accepted as a warning to reduce overcrowding at once. It was found that a moderate reduction in crowding and an improvement in ventilation, strictly enforced, always resulted in prompt reduction of carrier rates.

These are facts, and as such they are eloquent in showing how little susceptible to this infection are most persons at most times, how frequent must be the exposure to infection despite the infrequency of the disease, and how important in promoting the spread of the disease are such unhygienic factors as overcrowding and insufficient ventilation. Efforts to disinfect carriers by means of sprays, inhalations or drugs are not satisfactory if they are not combined with hygienic measures; and they are of doubtful utility with these.

The general low susceptibility to meningitis, the occurrence of several types of meningococcus, and doubt as to the value of preventive inoculations make these scarcely worth while. The use of antimeningococcus serum in treatment has not borne out the high hopes entertained at the time of its introduction, and meningitis remains a highly dangerous disease, more than half of the cases terminating fatally. Avoidance of the sick, of known carriers and of crowds, and good general hygiene with plenty of fresh air constitute the safest means of protection against this disease, even in times of epidemics. These are proved facts, and popular education must be continued along these lines.

There are two other diseases which are often classed mentally with meningitis, probably because they affect the central nervous sys-

(Continued on page 855)

"BY THEIR SPEECH YOU SHALL KNOW THEM"

is as true today in professional and in social life as it was two thousand years ago.

● **Throughout the U. S. and eleven foreign countries progressive men and women—doctors, business men, clubwomen, teachers—keep their speech and writing up to date by reading**

THE CORRECT ENGLISH MAGAZINE
(33d year)

● CORRECT ENGLISH is edited by Dr. J. T. Baker, international authority and author of twelve texts. The instruction is clear, interesting, and practical.

● Each Subscriber has the privilege of consulting The Editor on his problems.

● **Among the regular monthly features are: Your Everyday Vocabulary: How to Enlarge It. Problems of the Teacher and the Pupil. Correct Business Letter Writing. Errors of Contemporary Authors. Cosmopolitan Pronunciation.**

● Bring *your* knowledge up to date with the latest authoritative rulings.

THE CORRECT ENGLISH MAGAZINE
10 Issues $2.50

Subscribe now and take advantage of the

SPECIAL OFFER TO NEW SUBSCRIBERS

6 Monthly Issues for $1

(If you wish we will bill you later.)

The Correct English Publishing Company
Evanston, Illinois

Schools and Camps

Schools for Backward Children

Beverly Farm (INC.) *A Home and School for Nervous and Backward Children and Adults*

220 acre farm. 7 bldgs. New school gymnasium. 35th year. Industrial and school training given. Dept. for birth injury cases. GROVES BLAKE SMITH, M.D., Supt. **Godfrey, Ill.**

THE SYLVESTER SCHOOLS

For boys and girls whose progress has been hindered or retarded by illness, nervousness, speech defects or inability to adapt themselves to the usual form of instruction. Birchmont, new hall for girls. Illustrated catalog. 1612 Pleasant St., Des Moines, Iowa.

<> TROWBRIDGE TRAINING SCHOOL <>

Home school for nervous, backward children. *Best in the West.* Beautiful buildings. Spacious grounds. Experienced teachers. Individual supervision. Resident physician. Enrolment limited. Endorsed by physicians, educators. Booklet. E. Haydn Trowbridge, M.D., 1810 Bryant Bldg., Kansas City, Mo.

Schools and Camps

FORK UNION MILITARY ACADEMY

Fully accredited. Prepares for college or business. **Able faculty. Small** classes. **Supervised** study. Lower School for **small boys** in new separate building. **Housemother. R. O. T. C. Fireproof** buildings. Inside **swimming pool.** All athletics. **Best health record.** Catalog 36th yr. **Dr. J. J. Wicker,** Pres., Box B, **Fork Union, Virginia.**

PROGRESS IN PREVENTIVE MEDICINE

(Continued from page 854)

tem. These are poliomyelitis, or infantile paralysis, and encephalitis, which is sometimes called sleeping sickness. The germs causing these diseases have not been isolated and cultivated, and it cannot be said definitely that their epidemiology is the same as that of meningitis. Poliomyelitis and encephalitis appear to be only slightly contagious, even less so than is meningitis, and there are probably more healthy carriers than there are cases of the diseases. If the analogy with meningitis holds, it may be that these diseases do not become epidemic until the percentage of healthy carriers becomes quite high. However, too little is known in regard to either disease to permit one to become dogmatic in regard to it.

Poliomyelitis differs from most respiratory diseases in that it is most common in the summer and autumn, when the others are least common. This epidemiologic fact partly neutralizes experimental work showing that the disease can be caused in animals by the use of washings from the noses and throats of persons in the early stages of the disease. Of course it does not change any demonstrated fact, but it must influence the deductions which are drawn from the facts. How poliomyelitis is transmitted in nature is not really known, and educative measures must still be general rather than specific. Avoidance of contact with the sick, good hygienic living, fresh air, good food and abundant sleep are all worth while.

Encephalitis, whether of the epidemic lethargic type or the rarer and isolated cases which sometimes complicate other infections, such as measles or even smallpox, is of unknown origin but probably is due to a filtrable virus. The epidemic appearance of the disease during the World War came as a surprise to the medical world. It was apparently a new disease and, although not highly contagious if at all so, it spread over the entire world in a short time. It seemed to be related to the influenza epidemic, although not a part of influenza. Too little is known as to its cause and methods of spread to justify education in special methods of prevention. Such general measures as are recommended in regard to poliomyelitis cannot do any harm and may do good.

In general terms, the medical world is less successful in controlling respiratory diseases than those

(Continued on page 856)

Teaching Dick "Clean Hands" was a hopeless task

until this Wash-Up Game made play of it

"My Dick seemed to glory in dirty hands—considered it unmanly to wash as often as I wanted him to. He just *wouldn't* wash his hands regularly.

"Yet now it's a pleasure to see Dick make a bee line for the bathroom to wash up before eating—without being urged." . . . Lucky mother! The Lifebuoy Wash-Up Chart relieved her of this irksome duty.

The Lifebuoy Wash-Up Chart makes a *game* out of keeping hands clean. It will make *your* youngster take to washing hands like a duck to water! Each hand-washing means a point scored. He'll strain every effort for a perfect Clean Hands record.

Besides, this Chart shows *why* clean hands are so important—how hands pick up germs from everyday things we touch. Teaches that these germs breed disease . . . and that washing hands often with purifying Lifebuoy Soap—*always before meals*—helps protect health. For Lifebuoy lather removes *germs* as well as dirt. A real safeguard against the 27 germ diseases hands may spread, as listed by the Life Extension Institute.

For clear, fresh skin

Try Lifebuoy as a beauty aid. Its rich, deep-pore-cleansing lather makes skin bloom anew with clear, glowing health. Its clean, quickly-vanishing scent tells you Lifebuoy is different. Stops "B.O."

FREE: To parents whose youngsters hate to wash. A reforming Lifebuoy Wash-Up Chart and school-size Lifebuoy Soap for each of them. Simply mail coupon below.

LIFEBUOY

HEALTH SOAP

for face, hands, bath

free

LEVER BROTHERS CO., Dept. 199, Cambridge, Mass.

Please send me, free, Lifebuoy trial cakes and "Wash-Up" Charts for my _____ children.

*Name*_____

*Address*_____

*City*_____ *State*_____

PROGRESS IN PREVENTIVE MEDICINE

(Continued from page 855)

which are insect-borne or those received through polluted waters or food. Man is almost helpless in preventing colds, influenza and measles; pneumonia does not diminish, and diphtheria has not decreased as was hoped.

However, the success against tuberculosis, while by no means so striking as that of the measures against yellow fever and typhoid, has been highly encouraging. Success in the fight against tuberculosis has been almost entirely through education in hygiene and through improvements in the standards of living and of work. Whatever knowledge is lacking, it is known that these things are good and that education has promoted them.

[NOTE.—In the October issue, Dr. Ashburn will discuss contact diseases, focal infections, anemias and deficiency diseases.]

LIFE ENRICHMENT RATHER THAN EXTENSION IS STIMULUS

"Perhaps one of the reasons why the examination of apparently healthy persons as a prophylactic measure has not been more popular is that too much emphasis has been placed on life extension and not enough on life enrichment," an editorial in *The Journal of the American Medical Association* maintains.

"If the periodic health examination is to be popularized among young persons as a worthwhile practice for the enrichment of life, it must be offered on a different basis. The conception of future health makes little or no appeal to youths of high school or college age, who as a rule have abundant health and cannot be induced to worry about losing it. The child, still under closer control of parents, is more likely to have health supervision. The adult, sobered by responsibility for home and family, will protect his health if he is intelligent, and may be expected to respond to an appeal based on reason," the editorial continues.

The editorial cites health slogans of the Boy Scouts of America, the Camp Fire Girls and the 4 H Movement as examples of how the conception of periodic health inventories is being translated—as it must be if it is to succeed—into terms that give the idea an immediate applicability and attractiveness.

There is no kind of an achievement equal to perfect health.

—*Roosevelt.*

WHICH DEODORANT DO YOU *NEED* ?

● TAKE A MOMENT TO ANALYZE YOUR OWN PERSONAL PROBLEM

Every woman, without exception, makes herself more appealing through the use of *some* deodorant or anti-perspirant *every* day, summer or winter. Learn why . . . Send coupon below.

To Keep Armpits FRESH

PERSTIK

the original "lipstick" deodorant

To keep the underarms clean and cool—protect against rancid body odor, and *reduce* excess perspiration—we recommend PERSTIK, in the smart black-and-ivory case. As easy to use as a lipstick. Apply any time, even after shaving or a depilatory. PERSTIK is approved by Good Housekeeping because it is a TRUE deodorant . . . it doesn't *hide* body odor . . . PERSTIK's exclusive new greaseless formula prevents any odor from *starting*. Economical—50c at dept. and drug stores. Insist on getting GENUINE PERSTIK—name right on the cap.

To Keep Armpits DRY

PERSTOP

New liquid in the non-spillable bottle with self-applicator top

Note the patented "no-mess" applicator permanently set in neck of bottle.

To deodorize and at the same time prevent underarm dampness, we recommend PERSTOP. Just shake the bottle, and apply. No separate applicator. Cannot drip or spill.

Approved by Good Housekeeping for safety, purity and effectiveness. One application gives 2 to 7 days' security against moisture *and* odor. Saves clothes and cleaning bills. 50c at all toilet goods counters.

Send for FREE illustrated booklet

PERSTIK, *463 Fifth Avenue, New York City*

Please send me, in plain personal envelope, your important booklet, "What Every Woman Ought to Know About Deodorants".

Name.....

Address.....

City.....*State*.....

A CENTURY OF PROGRESS IS DISPLAYED IN SCIENCE

That thousands of men, women and children are interested in the important question of how to keep well is being evidenced daily by the throngs visiting the comprehensive medical exhibits in the Hall of Science at A Century of Progress.

For the first time in the history of international expositions, organized medicine, dentistry and pharmacy are presenting to the public the story of their contributions to the progress of civilization.

Dr. Eben J. Carey, head of this division, has summed up the objectives of the entire exhibit, as follows:

"First, to compare health conditions of a hundred years ago with those of today; second, to instruct the public in the intricacy of the living human machine and to give warning not to meddle with it by dangerous self medication; third to interest the layman in the scientific story behind the physician's services and opinions regarding health and sickness; and fourth, to show that compassion for suffering humanity and not commercialism ruled the lives of the great discoverers and practitioners of medicine."

England, France, Germany, Italy, Austria, Holland and Canada as well as the United States are represented.

Each display has been so arranged that it is proving entertaining and educational, not only to physicians and medical scientists but to laymen. In graphic, moving exhibits, those who come to the World's Fair will be clearly shown that the sciences and arts of safeguarding human health have made their greatest advance in the past century of progress.

HEALTH EXAMINATIONS

"The health of the State is but a composite of the health of each individual community," according to an editorial in *The Journal of the Medical Association of the State of Alabama.* The prevention of communicable diseases is one of the main duties of the state and every physician within that commonwealth. Physical examinations of school children to detect remedial defects is another of the duties which the county health officer should oversee, although he cannot examine each child personally; the complete delegation of this task to the nurse and pedagog often gives the child and parent a false sense of security in the face of the incomplete investigations by untrained hands. The aid of the neighborhood physicians must be enlisted.

CANNING METHODS ARE EXPLAINED IN PAMPHLET

First the planting, then the harvest, and for the garden crop, the season of canning, drying, pickling and preserving to provide food for the wintertime!

The Bureau of Home Economics of the U. S. Department of Agriculture offers for a nominal fee a pamphlet which gives specific directions for home canning of vegetables and fruits.

Most of the household arts had their beginnings in the primitive home. Canning, however, was a nineteenth century discovery, and it originated as a plan for mass production. To provide for his armies, Napoleon offered a prize for the development of some method of preserving perishable food. Nicholas Appert won that prize by the success of his experiments with a process which is now known as canning. He cooked the food, then packed and sealed it in air-tight containers, and the food kept for many months. Neither Appert nor anybody else in his day knew why.

More than forty years later the great scientist Louis Pasteur of France announced to the world that micro-organisms present in food, water and air cause spoilage of food. Heat destroys those micro-organisms and sterilizes the food. Here was the secret of Appert's success.

Many persons still use the method of Appert, the "open kettle" method; it works with fruits and tomatoes, provided there is no contamination at the moment between packing and sealing the containers. A later method is the "cold-pack." The Bureau of Home Economics recommends the "hot-pack" method in preference to either of these. For this method, the food is heated in a minimum quantity of liquid, in order to reduce the bulk and drive out air. Then the containers are packed with the boiling hot food and processed in a water bath.

These methods can be used with the acid foods, such as fruits, tomatoes, pickled beets, and ripe pimentos, because the presence of the acid together with the boiling temperature destroys the micro-organisms that cause spoilage.

For nonacid foods, such as meats, corn, beans, peas, asparagus or baby beets, "processing" in the pressure cooker is recommended by the Bureau of Home Economics.

It costs six times as much to cure a tuberculosis patient as it does to educate him to avoid it.

—Dr. John Peck.

BACK TO WORK *with* HANDS *and* FACE *always* FIT...

If summer sun and wind have left you with skin-dryness, Nivea Creme or Nivea Skin Oil will start you back to smooth, lovely skin.

Nivea Creme and Nivea Skin Oil give their soothing, smoothing action because of the exclusive ingredient Eucerite. Whichever of the two you use, the results are equally good.

Reasonable in price, economical in use, Nivea Creme and Nivea Skin Oil are real skin helps for all the family and for all seasons.

Send for your free trial tube of Nivea Creme, or for a sample bottle of Nivea Skin Oil.

NIVEA SKIN OIL

Trade Mark Reg. U. S. Pat. Off.

P. Beiersdorf & Co., Inc., Dept. H-9
46-10 11th Street, Long Island City, N. Y.

Please send me without charge a trial tube of Nivea Creme or a trial bottle of Nivea Skin Oil. (Check which you prefer.)

☐ NIVEA CREME ☐ NIVEA SKIN OIL

Name.....

Street.....

City.....State.....

LEAD IN STOVE ENAMEL IS POISONOUS TO EMPLOYEES

The enameling of stoves is a growing industry, bringing efficiency and brightness to the kitchen, but it is growing with a known hazard to the health of many of its workers, since vitreous enamel usually contains lead which, breathed as dust in the air or entering the digestive system, may result in poisoning.

Because so many of the workers in this industry are women, the Women's Bureau of the U. S. Department of Labor undertook a study of this particular industry to investigate the actual extent of the hazard and to learn what steps may be taken to control this growing evil.

About fifty enamel plants were visited in the Middle West, and interviews were held with nearly 700 women working in the plants. At least three fourths of the women were found to work where at least some leaded enamel was in use. Fifty per cent of those women who used a sprayer rather than a brush in their work complained of a metallic or sweetish taste, indigestion, constipation and menstrual disturbances.

The most frequently reported reason for absence was illness, and illness with symptoms suggestive of lead poisoning was more prevalent among the sprayers than was any other form, although in general industrial experience the common cold leads in frequency.

No plant furnished complete conveniences of hot water, soap, individual towels and nail brushes. In thirteen plants none of these facilities were available. Few of the plants included in the study made provision for regular physical examinations or medical care, although the facts show clearly the need of such supervision.

In about half of the stove-enameling plants visited, regular working hours were nine and under ten a day. Long working hours intensify the dangers of industrial poisoning because they increase the actual dose of poison taken and lessen the chances of complete elimination between doses.

It was definitely concluded by the committee that much more attention must be given to means of controlling working conditions in this industry. One encouraging point in the report explains that eight plants are using a leadless enamel. Certainly the removal of lead from enamel will be found more effective than the most adequate precautionary methods that may be devised.

BY CUTTING RAGWEED HAY FEVER CAN BE REDUCED

Local campaigns against ragweed will reduce a large share of the autumn hay fever. The Public Health Service has estimated that of the two types of hay fever, spring and autumn, 65 per cent of the cases occur in the fall; and 90 per cent of these cases east of the Mississippi River are caused by ragweed. Much of the usual blame for hay fever has been cast on goldenrod. The department absolves goldenrod from much of this blame because the pollen from this plant is carried about by insects and does not float in the air like ragweed and other hay fever pollens.

By decreasing the quantity of ragweed pollen in the air sufficiently, those persons only slightly subject to the fever will not contract it. This will lessen the severity of the disease for those more subject to it.

Ragweed should be cut twice a year, a leaflet from the Department of Agriculture states, the first time just before it flowers and again before flowers develop on the low branches which appear after the first cutting.

AVOID COMMON TOWELS AND DRINKING CUPS

It is well known that the use of drinking cups or towels by two or more persons, without thorough washing and sterilizing between uses, may transmit various types of communicable diseases. In this way diphtheria, scarlet fever, common colds and other diseases may be communicated. Rinsing out cups and glasses with cold water after use is not adequate protection.

It is rather unusual at present to encounter common towels in public places; individual paper towels are frequently provided.

Unfortunately, however, the common drinking cup is still encountered despite its obvious danger. It shows itself occasionally in some industrial plants, on public and private golf courses and in other unexpected places. The public should cooperate with health authorities in bringing about its complete elimination, according to a report from the Connecticut state department of health.

"The world is a looking-glass and gives back to every man the reflection of his own face. Frown at it and it in return will look sourly upon you; laugh at it and with it, and it is a jolly, kind companion."

—*William M. Thackeray.*

SAVE TIME FILLING BOTTLES

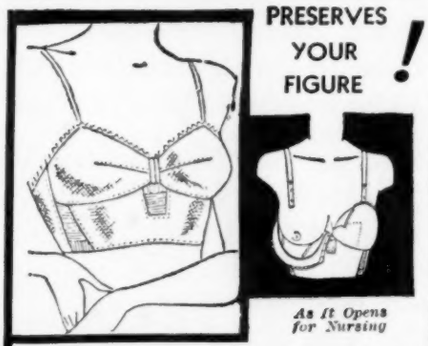
A HYGEIA wide-mouthed nursing bottle needs no funnel to fill it; no brush to clean it. You save minutes each day because Hygeia bottles are easier and quicker to clean and fill.

Use Hygeia wide-mouthed bottles to guard against *dirt*—the only cause of colic as far as bottles and nipples are concerned. Use Hygeia Breast Nipples. Tab keeps hands from touching inside surface. Shaped like mother's breast.

If cleanliness and time are important to you, try this bottle and nipple. Although they cost a few cents more, they are still the smallest item of expense in feeding a baby. Bottle guaranteed to withstand all temperature changes.

Write to Hygeia Nursing Bottle Company, 197 Van Rensselaer Street, Buffalo, N. Y., for *free* copy "Baby's Own Book." Contains practical and approved suggestions on child care and training.

Hygeia
The Safe Nursing Bottle



As It Opens for Nursing

NURSING BRASSIERE
by Maiden Form

Scientifically designed to give nursing mothers anatomically correct support and to preserve the figure—both during and after the nursing period. Recommended by doctors, this brassiere enables you to wear smart dresses, with every confidence in the trim contour of your silhouette. Breast sections are delicately rubber inter-lined, with holders for pads of sanitary gauze, to protect nipples. No. 7005, of dainty flesh colored cotton mesh, $1.50.

Also, Short Nursing Bandeau, without diaphragm band but with same breast shield features as the long nursing brassiere. No. 382, of flesh colored porous mesh, $1.00.

If Your Dealer Cannot Supply—Write Dept. HYA

MAIDEN FORM BRASSIERE CO., Inc.
245 Fifth Avenue, New York

ADEQUATE FOOD BUDGET PROTECTS HEALTH

Most families are finding it necessary, because of financial conditions, to readjust their budgets. Since food expenditures assume such a large proportion of the total family expense, the woman who selects and does the marketing for these supplies bears a great responsibility—particularly because the health of the family depends to no little degree on the meals supplied to them, according to Dr. J. M. Wisan, chairman, Council on Mouth Hygiene, New Jersey State Dental Society.

The food problem of supplying healthful foods and keeping within the budget confronts every housewife. The United States Department of Agriculture in its publication "Guide to Economical Balanced Rations" has come to the assistance of mothers with this scientific advice. It states:

"Give the whole family every day bread and other grain foods, like cracked wheat, corn meal, oat meal, rice, grits, potatoes, milk, fresh, evaporated or dried, one or more vegetables or fruit, especially vegetables of a green or yellow color, molasses, sugar or other sweets, butter, lard, fat meat or other fat, plenty of water to drink. Several times a week tomatoes, raw cabbage or raw fruit, dried beans, peas or peanuts, lean meat, poultry, eggs, fresh fish, canned salmon or cheese.

"Give young children milk at every meal, tomato or orange juice every day—several eggs a week if possible.

"This is not a desirable standard for normal times and where additions can be made increase the milk to a quart per child per day and a pint for adults. Increase fruits, vegetables and eggs."

Food should receive first place on the budget list. If one is deprived of new clothing, no permanent harm is effected; costly amusements can be replaced by less expensive forms. Remember, however, that prevention of disease cannot be neglected without future loss. This is certainly true of dental disease. A tooth once lost can be replaced but at increased cost and loss of biting efficiency in most cases.

It is sound and sensible practice to provide the foods such as milk, fruits and vegetables that maintain mouth health. Do this and prevent dental disabilities.

Man's chief business is reversing the processes of Nature—that is the way he gets his living.—*Edwin E. Slosson.*

MAN-MADE WEATHER HAS PROMISING FUTURE

"Temperature is only one phase in our new command of the conditions of the air which surrounds us. We have also learned to clean the air, to free it from dust and objectionable foreign matter. We have learned to establish and control any desired condition of humidity—which is just as important to our comfort and health as the temperature of the air," Willis H. Carrier explains in "The Economics of Man-Made Weather," which appears in a recent issue of *Scientific American.*

In addition he relates how industry brought about the inception of manufactured weather, in order that the manufacturing of certain weather-sensitive products might be independent of weather, seasons or geographic locations. This is especially true in the manufacture of confectionery, in modern bakeries, in the manufacture of cigars and cigarets and in lithographing. It is used in the wrapping and drying of articles, as in photographic films, chewing gum and summer sausage. In fact, more than 200 industries have already found air conditioning an indispensable servant.

Air conditioning for human comfort is a new and fascinating field; this has the greatest potentialities for making air conditioning a great industry.

Certain theaters, stores and business offices have already found air conditioning satisfactory. Although it has not been put to general use as yet, Mr. Carrier is enthusiastic concerning its future prospects, which he believes will develop rapidly.

The practicability of air conditioning in trai : is being seriously considered at the present time.

In conclusion, Mr. Carrier states: "Air conditioning applied to human comfort not only contributes to human welfare but creates a new and rapidly increasing demand usefully aiding and taking up the slack of unemployment in technological advance in this and other fields. It may be the key to the successful exploitation of the wealth of the tropics. As an industry, it is yet in its infancy, and of its possibilities the surface only has been scratched. Upon the development of industries such as this our future industrial and social progress and well-being depend."

In all things relating to disease, credulity remains a permanent fact, uninfluenced by civilization or education.—Osler.

REVOLTING!
the job of washing dirty handkerchiefs

Illustration and text copr. 1933, Kleenex Co.

Why do it?
use
KLEENEX
disposable tissues
and destroy

THE worst job on earth! That's what any woman says about washing dirty handkerchiefs.

Then why inflict this repulsive job on yourself, or on anyone else?

Use Kleenex, as so many other people now are doing. They started its use during colds—then found it impossible *ever* to return to the old, unsanitary way.

Daintier than handkerchiefs

Kleenex is made of soft cellulose in convenient squares, handkerchief size. These disposable tissues are softer than any handkerchief—downy, dainty, gentle, absorbent.

Costs less than laundering

If you have been sending washing out, you will find the use of Kleenex means a great saving in your laundry bills. You can use many tissues for the cost of laundering one handkerchief. And think how pleasant to use each tissue only once—selecting a fresh, clean one every time.

And a host of other uses

Try some of the other uses, that Kleenex fans have written us about! Kleenex for applying ointments and lotions. Kleenex for the baby. Kleenex for applying cosmetics—and for removing them. Kleenex as a sanitary emergency powder puff.

And never, never again the revolting job of washing dirty handkerchiefs! All drug, dry goods and department stores sell Kleenex.

KLEENEX
for your pocket!
2 packets, 5c
Twelve regular-size Kleenex tissues in each, conveniently packed to fit your purse or pocket. Every druggist should have the Pocket Packet of Kleenex on his counter.

KLEENEX *disposable* **TISSUES**

The "DEMON" HOUSEKEEPER

"A little bundle of nerves was Mrs. Green-Brown. The doctor called at her home because she had not slept well for weeks and her heart was acting strangely. It was the heart disorder which frightened her. . . ."

Thus Dr. Lee D. Cady writes about a type of woman you probably know, the "demon" housekeeper. She is the woman who works in a frenzy to keep her house spotless—and her family miserable. And yet she is conscientiousness personified. She is to be pitied rather than blamed. She is the victim of nervous fears. There is help for her in this enlightening article in the October HYGEIA, for it may bring about an understanding of her fears which will help her to get rid of them.

An Authoritative Article on Heart Disease

With the increase in heart disease, Dr. Paul D. White's article on "Heart Disease Then and Now" is of extreme interest. He discusses the recent advances in the study of heart disease, cites examples of the most important kinds of heart disease that confront us today, and explains the causes. Don't miss this informative and enlightening article by a widely known authority on the subject of cardiac diseases.

Additional Features of the October Hygeia

"Wings of Death"—Air Planes may become "Wings of Death" if they bring yellow fever infested mosquitoes to this country from Central and South America. Alan Bradford gives a thrilling account of the fight the United States Public Health Service is making to prevent the possibility of an epidemic of yellow fever through aerial transportation.

◆◆

"Should Your Child Wear Glasses?"—If your child is not succeeding in school or if he presents behavior problems, it may be due to the fact that he needs glasses. Dr. Robert J. Burke tells why so many children today have poor vision and explains what should be done for them. Here is an article that will be an eye opener to many parents.

◆◆

"Salvage"—Frederick Bradman, a patient who has recovered from poliomyelitis, describes his reactions to treatment. Here is an encouraging and instructive article for others who suffer from this disease.

◆◆

"The Curse of the Fire Spirit"—Do you know that nearly 7,000 people die each year from fires and burns? Curtis Billings of the National Safety Council tells how to avoid fire hazards and what to do in case a fire occurs.

◆◆

"Keeping the Underweight Child in School"—Mothers who are confronted with this problem will gain help from these suggestions. They are given by a doctor's wife, Regina Woody, who built up her own greatly underweight child to one well over her average weight—at no loss to her school work.

◆◆

Other timely and helpful articles in the October HYGEIA include "The Health Examination of the School Child" by a school physician; "Safeguarding the Athlete's Health" by George R. McCormick; "Worm Powders" by Dr. R. B. Rogers; "The Teaching of Sex to the Young Child" by Dr. Thurman B. Rice; the second chapter of the physiology for young children, "I Want to Know"; and others. Don't miss this entertaining number of HYGEIA!

If You Are Not Already a Subscriber This Offer Is for YOU—

Introductory 6 months of HYGEIA, $1

Regular Subscription $2.50 a Year

AMERICAN MEDICAL ASSOCIATION H-9-33
535 North Dearborn Street, Chicago

Enclosed is $1.00 for an introductory 6 months' subscription to HYGEIA, the Health Magazine. I am a new subscriber.

Name .....

Address .....

Preserve and Enhance the Beauty of Your Skin

with Elmo BEAUTY PREPARATIONS

Your skin deserves the best treatment you can give it. Use Elmo toiletries—they are **safe** for your complexion. Elmo toilet preparations are as pure as it is humanly possible to make them, and contain not one ingredient that could possibly harm the normal skin. Try them for yourself. Bring out the natural beauty in your own skin by using these exceptional preparations.

—ELMO—

RA-LO LOTION — RA-LO FACE POWDER
MELTING CREAM — CLEANSING CREAM
CUCUMBER CREAM — SKIN FRESHENER
TONIC ASTRINGENT — TISSUE CREAM

At Drug Stores and Department Stores

ELMO, Incorporated
21st Street and Hunting Park Avenue
Philadelphia - - Pennsylvania

FREE!
Six Safety Posters with each year's subscription

Posters! Stories! Plays! Lesson Plans! Informational Articles!

An excellent publication for both teacher and pupil. Devoted to practical safety teaching material presented in a modern manner.

SAFETY EDUCATION MAGAZINE
$1.00 A Year
One Park Ave. New York

A sane pamphlet on sex for adolescents

Growing Up in the World Today

Approved by Clergy—Physicians—Educators
Wholesome—Frank—Dignified

20c postpaid — Massachusetts Society for Social Hygiene, 1150 Little Building, Boston, Mass.

The SEX TECHNIQUE IN MARRIAGE • By I. E. Hutton, M.D.

"Dr. Ira Wile describes the book as a clear, succinct, non-emotional, authoritative and conservative exposition of the practical factors involved in making marriage successful on the sexual level. That describes the book exactly . . . It is primarily concerned with the conduct of the honeymoon and with the technic of the sexual performance." —Hygeia.

Acclaimed by the Medical Press Everywhere

At bookstores or direct from Price $2.00
EMERSON BOOKS, 126 Maiden Lane, N.Y.C.

FALSE CLAIMS PROMOTED BY MUCH MODERN ADVERTISING

Originally the purpose of advertising was to point out and acquaint the public with the fact that certain commodities could be obtained from certain purveyors of such commodities at certain prices. The appeal to the purchaser was based largely on the quality of the goods, the convenience of purchase and the price. Much modern advertising, however, is largely designed to create new desires, in many instances for luxuries; to establish fears relative to the possibility of disease, as in the case of certain widely advertised antiseptics and even toilet tissues; and, in some instances, even to urge excess in cases in which excess may be harmful and actually opposed to good health and hygiene.

Conspicuous examples of the last mentioned type of advertising are the claims made in recent advertisements of Chase and Sanborn's Coffee and the statements used in the promotion of various types of laxatives. An editorial in *The Journal of the American Medical Association* points out the following falsehoods in the advertising of the aforementioned coffee concern: first, that new scientific findings have done away with that ancient superstition about too much coffee; second, that it is the rancid oil in stale coffee that is harmful; third, that five cups a day of fresh coffee is not too much; fourth, that this coffee is a natural, healthful aid to digestion.

If there is any evidence to support any one of these claims, it is not available in modern scientific medical literature. Obviously the purpose of the advertising is to discredit all competitive brands of coffee.

Of great harm also are the advertisements of various laxatives, which claim that the user may do whatever he pleases on the night before, stay up as late as he pleases, drink almost anything that may be handed to him and that the use of the laxative will then insure for the next day plenty of energy, vitality and health. The claim is false as well as exaggerated.

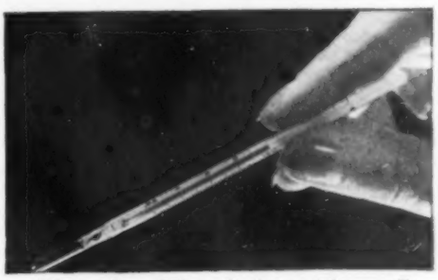
Such advertising, the editorial concludes, is vicious and harmful in every sense of the word and must inevitably react unfavorably against those who are responsible for it.

"He who overlooks a healthy spot for the site of his house is mad and ought to be handed over to the care of his relations and friends."

—*Varro.*

What! A REAL TAYLOR FEVER THERMOMETER *for only* $1.00

"Junior seems sick, but I hate to bother the doctor. I'll take his temperature first."



"He is sick.... I'll get the doctor right away."

"Mrs. Payne, your promptness saved Henry from a serious illness."

BE READY to check up on family's health with an accurate, new-type Taylor Fever Thermometer. This thermometer (named the Taylor Instanta) registers in one minute. Then it has little marks (graduations we call them) that are etched in red on one side of the scale, to indicate *above normal* temperatures and etched in black on the other side to indicate *below normal* temperatures. When the mercury touches both red and black—that means normal, nothing to worry about. Far easier to read than ordinary thermometers. But the real news is the price. Only $1.00. Remember the name—Taylor Instanta.

Write for free booklet—"Childhood, Youth and Old Age"—sent upon request to Taylor Instrument Companies, Rochester, N. Y., or Toronto, Canada.

Taylor INSTRUMENTS

IN INDUSTRY, other types for indicating, recording and controlling temperature, pressure and humidity.

Teachers! Make Use of the American Medical Association's

HELPS for HEALTH TEACHING

In addition to the wealth of health teaching material in HYGEIA each month, the American Medical Association publishes a variety of pamphlets, books, plays, charts, and posters which you can use to advantage in teaching health. Make use of this *authentic* material! Note the following and order by number:

HEALTH PLAYS

1—**The Good Health Elves**—17 to 25 characters. 15c a copy. Set of 17 for $2.00.

2—**The Trial of Jimmy Germ**—8 characters. 10c a copy. Set of 8 for 35c.

3—**The Friendly Brushes**—11 characters. 10c a copy. Set of 11 for 50c.

4—**The Magic Fluid (The Diphtheria Antitoxin)**—8 characters. 10c a copy. Set of 8 for 35c.

5—**On Board the S. S. Health**—20 characters. 10c a copy. Set of 20 for $1.00.

6—**The Duchess of Trent**—8 characters. 10c a copy. Set of 8 for 35c.

7—**The Jolly Smiles Crew**—11 characters. 10c a copy. Set of 11 for 50c.

8—**A Syncopated Health Trial**—8 characters. 10c a copy. Set of 8 for 35c.

9—**The Animals Protest**—6 characters. 10c a copy. Set of 6 for 30c.

10—**The Trial of Johnny Jones**—35 characters. 10c a copy. Set of 20 copies for $1.00.

11—**The School Lunch Room**—11 to 20 characters. 10c a copy. Set of 10 for 45c.

12—**The Treasure of Healthy Harbor**—30 to 40 characters. 10c a copy. Set of 30 for $1.00.

SEX EDUCATION

13—**The Story of Life**—for boys and girls 10 years of age.

14—**In Training**—for boys of high school age.

15—**How Life Goes On**—for girls of high school age.

16—**The Age of Romance**—for young men and women.

17—**The Venereal Diseases**—for both sexes, high school age or older.

Written by Dr. Thurman B. Rice.

Single copies, 25c each. Set of 5, $1.00.

NUTRITION AND DIET

18—**The Food We Eat**—Discussion of calories, vitamins, etc. 10c.

19—**A Square Meal**—Balanced diet and growth. 5c.

20—**Food Posters**—A set of 3, illustrating the amounts of vitamins, iron and calcium in common foods. One poster, 30c. 2 or more, 20c each.

PHYSICAL EDUCATION

21—**Simple Lessons in Human Anatomy**, by Dr. B. C. H. Harvey. 435 pages. Cloth bound. $2.00.

22—**Rules of the Game**, by Dr. Jesse F. Williams. 10c a copy. 100 copies, $9.00.

23—**Proper Development of the Body as the Basis of Health**, by Dr Joel E. Goldthwait. 10c a copy. 100 copies, $6.00.

24—**Ten Commandments of Good Posture**, by Dr. Philip Lewin. 5c a copy.

MENTAL HYGIENE

25—**Mental Hygiene in Home and School.** 5c.

26—**Broken Minds of Youth**—Causes and management of mental qualities in the young. 10c.

27—**Why Stutter?** by John A. Glassburg. 5c.

28—**Your Child's Mental Health**, by Edgar A. Doll. 5c.

DENTAL HYGIENE

29—**Our Food and Our Teeth**—5c.

30—**Common Sense in Mouth Hygiene**—15c.

31—**The Teeth of the School Child**—5c.

32—**Taking the Child to the Dentist**—5c.

CONSERVATION OF VISION

33—**School Children's Eyes**, by Dr. Frank Allport. 10c.

34—**Eyes and Vision**, by Dr. Edward Jackson. 10c.

35—**Testing the Sight of Young Children**, by Dr. Park Lewis. 10c.

HEALTH PROBLEMS IN EDUCATION

36—**Health Essentials for Rural School Children.** 15c a copy. 100 for $8.00.

37—**Health Improvement in Rural Schools.** 25c a copy.

38—**Health Service in City Schools.** 25c a copy. 100 for $15.00.

39—**Daylight in the Schoolroom.** 5c a copy. 100 for $3.00.

40—**Health Education, A Program for Public Schools and Teacher Training Institutions.** Paper cover, $1.25. Cloth cover, $1.75.

41—**Conserving the Sight of School Children.** 35c.

42—**Snellen's Vision Chart for Schools.** 25c.

43—**Ventilation of School Buildings.** 15c.

44—**Health Inspection of School Children.** 10c.

45—**Health Inspection Form for Children.** 5c.

COMMUNICABLE DISEASES

46—**Diphtheria**, by Dr. George H. Weaver. 15c.

47—**Smallpox and Vaccination**, by Dr. Jay F. Schamberg. 15c.

48—**Typhoid Fever**, by Prof. Edwin O. Jordan. 10c.

49—**Scarlet Fever—Measles, Neighborly Diseases**, by Dr. Ludvig Hektoen and Dr. Ethel B. Perry. 10c.

50—**Protecting the Child from Tuberculosis**, by Dr. J. A. Myers. 5c.

51—**From Whom Did He Get It? To Whom Has He Given It?**, by Dr. J. A. Myers. A summary of the anti-tuberculosis campaign in the U. S. 10c.

52—**Whooping Cough**, by Drs. Ludvig Hektoen and Beatrice Lovett. 10c.

53—**How to Control Diseases in School**, by Dr. Harold B. Wood. 5c.

The New Healthyland

54—A colorful big picture book containing a collection of the best children's health material from HYGEIA. 168 pages of stories, rhymes and pictures. Size 8½x 11½. $2.00.

HYGEIA, The Health Magazine

Authoritative information on practically every phase of health. A special department every month, "School and Health," edited by Dr. J. Mace Andress, is full of practical helps for health teaching. A 48-page booklet, "Health Teaching Plans from HYGEIA," containing 27 health teaching projects from this department, will be sent free with each teacher's subscription to HYGEIA.

55—One year of HYGEIA, $2.50.

56—Introductory 6 months of HYGEIA to new subscribers, $1.00.

Order by Number

AMERICAN MEDICAL ASSOCIATION H-9-33
535 North Dearborn Street, Chicago.

Enclosed is $..... for health teaching material corresponding to numbers below.

.....

.....

.....

Name.....

Address.....

SELF-HELP GARMENTS

Are designed to help a great deal in early forming of good habits that chart a child's whole future. Two-year minds and tiny fingers are considered so that the toddler may easily learn to dress himself, developing resourcefulness and independence.

The red-heart label identifies the original and genuine Vanta Self-Help garments at your dealers.

Free!

The Toddler

An attractive illustrated booklet giving sound advice on child care. Your dealer may have it. If not, write Dept. H.

EARNSHAW KNITTING COMPANY
Newton, Massachusetts

CIVILIZATION AND SOIL FERTILITY MAKE "COSTA RICA"

Costa Rica—The Rich Coast—was so named because explorers found there fertility of the soil, which seemed to produce every conceivable variety of vegetation in the greatest possible profusion. Indeed, even at the present time Costa Rica lives up to its name. But in addition to its natural richness, a civilization has grown which is the pride of every native. For Costa Rica actually has more schools than soldiers. These schools are practically all maintained by the government. Free education being obligatory, this is one of the heaviest items in the nation's annual budget. All education is of the highest standard. Many boys graduated from Costa Rican high schools have been welcomed at American and European universities, where they have often gained the highest honors, particularly in the realms of medicine, engineering, architecture, law and agriculture.

The education of girls is also on a high plane in this land.

Sport goes hand in hand with education in Costa Rica. A love of football seems to be the natural heritage of the youth of the country. Tennis, g lf, swimming, running and baseball also have their place and are slowly but surely gaining in popularity.

The nation does not fail in its duty in caring for the orphans, insane, paupers and other unfortunates who have a claim on the charity of others.

There are agencies for the distribution of milk to undernourished children and babies of poor families. There is also a tuberculosis sanatorium high in the mountains. Besides the many agencies of this kind there are free hospitals and similar institutions in every town and village with a population of more than 2,000 persons.

A story of this interesting country is related by John M. Keith in the *Bulletin of the Pan American Union.*

"The average individual in the United States loses about seven days each year from sickness involving inability to work. There are additional days of discomfort which interfere more or less with a person's duties, but these were not included in the statistics. Converted into economic terms, this means that there is a loss of 2 per cent of total current production. This, in round numbers, amounts to more than $1,250,000,000 annually in the United States."—*Dr. Louis I. Dublin.*

DOCTORS KNOW

and they say "PYREX NURSING BOTTLES"

SAFETY for your baby is first reason for their choice. They know that Pyrex Brand Nursing Bottles are practically immune to breakage from heat or cold. They protect your baby against the dangers of bottles cracked or broken in heating or in sterilizing.

And you'll enjoy using "Pyrex" Nursing Bottles because they're comfortable to hold, easy to clean, and plainly marked for quick, accurate measuring.

Two sizes . . . 8-oz. with narrow neck or wide mouth, 25¢; and new 4-oz., narrow neck, 15¢.

"Pyrex" is the registered trade-mark of Corning Glass Works, Corning, N. Y., and indicates their brand of resistant glass. These prices for the U. S. only.

New FLEXIBLE THUMB GUARD

Prevents suction. Ends habit. Genuine stainless steel, guaranteed rust-proof. Safe, sanitary — cellophane wrapped. Two sizes—for ages 1 to 10 years. At drug or department stores, or mailed postpaid for 50c.

For Only 50c

KEYDEL CO., 1302 E. Woodbridge St., Detroit, Mich.

The A.P.-UPLIFT

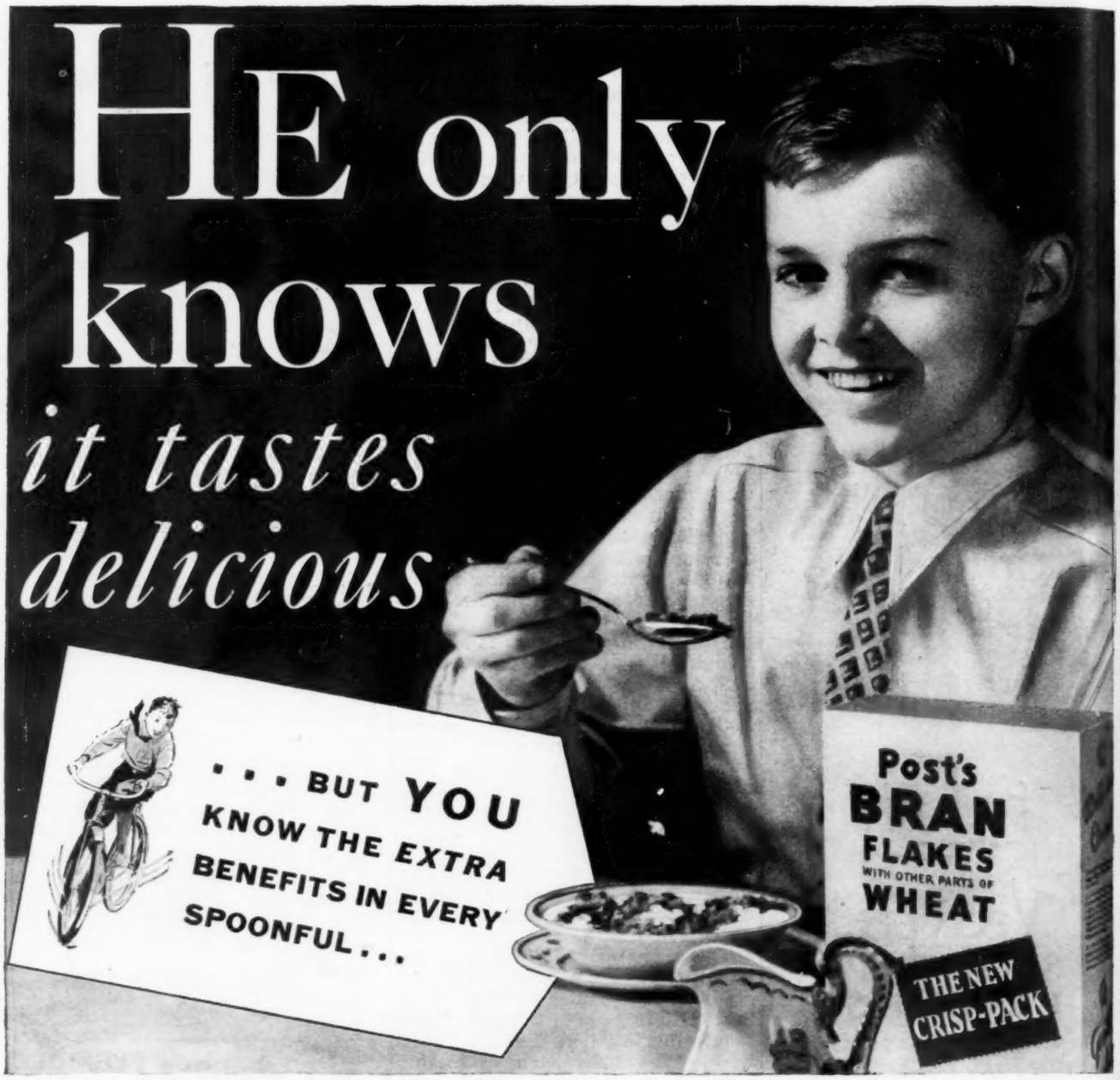
U. S. Pat. 1,702,922 —Invented by Mme. Poix to create the stylish upward contour; to relieve pain and remove cause of many bust troubles; also for pre-natal and nursing periods.

Sizes 30 to 44
Pink Repp.....$1.00
Pink Tussah Silk... 1.50
Pink Mesh or Jersey 2.00

If not at dealers, order direct giving exact bust measure next to skin. Booklet free on request.

G. M. POIX, Inc.
103 Madison Ave.
New York, N. Y.

HE only knows *it tastes delicious*



MOTHERS! THIS DELICIOUS CEREAL GIVES CHILDREN THE BULK THEY NEED IN A BREAKFAST FOOD SO GOOD THEY CLAMOR FOR IT. SERVE IT OFTEN.

YOU mothers will be delighted at the way your youngsters take to this crispy, delicious-tasting breakfast food.

Doubly delighted—for you know how helpful Post's Bran Flakes can be as a protection against constipation resulting from too little of the necessary bulk in the diet.

It is a fact that thousands of children suffer from this type of constipation . . . while their parents, unsuspecting, see only the effects—listlessness, ill temper, poor appetite.

Post's Bran Flakes protects your child against this condition. For it provides the bulk he needs . . . bulk that so many diets lack. Thus it helps to prevent intestinal sluggishness . . . and to insure normal, regular elimination of food wastes.

So naturally, we believe, you will want to serve Post's Bran Flakes regularly . . . as an important part of this proven health program: Lots of exercise and fresh air every day . . . enough sleep . . . plenty of water to drink . . . milk, fresh fruits and vegetables. And a generous daily helping of delicious Post's Bran Flakes.

For Grown-ups too!

What a treat your child will get from each bowlful! You mothers and fathers, too, will love it . . . plain or with fruits or berries. So serve it regularly every day . . . for sheer enjoyment, and for all the good it does you! A product of General Foods.

POST'S BRAN FLAKES
WITH OTHER PARTS OF WHEAT

© G. F. Corp., 1933